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IN THE MATTER OF THE APPLICATION
OF ARIZONA PUBLIC SERVICE
COMPANY FOR APPROVAL OF
MODIFICATIONS AND FINAL APPROVAL
OF ITS NON-RESIDENTIAL DEMAND
SIDE MANAGEMENT PROGRAMS.

DOCKET NO. E-01345A-05-0477

**NOTICE OF FILING 13-MONTH
REPORT AND REQUEST FOR
APPROVAL OF MODIFICATIONS AND
FINAL APPROVAL OF THE NON-
RESIDENTIAL DEMAND SIDE
MANAGEMENT PROGRAMS**

I. INTRODUCTION

Arizona Public Service Company ("APS" or "Company") is submitting this filing in compliance with several Commission Decisions. In Decision No. 68488, issued February 23, 2006, the Commission granted interim approval of Arizona Public Service Company's ("APS" or "Company") Non-Residential Demand-Side Management ("DSM") Programs. The Company was ordered to provide the Commission with updated information regarding these programs and to request final approval of the Non-Residential DSM Programs within 13 months ("DSM 13 Month Filing") which is attached as Exhibit A. The DSM 13 Month Filing includes information on program spending and budget details, including specific information regarding rebates and incentives, program and administration costs; provides information about the level of school participation in the programs; and updates the Total Resource Cost ("TRC") analysis and outcomes for all measures currently approved and for additional measures being proposed as enhancements to the DSM Programs.

Additionally, in Decision No. 68648 (issued April 12, 2006), which addressed the Company's Residential DSM Programs, the Commission also required APS to provide a report regarding the Residential Heating, Ventilation and Air Conditioning ("HVAC") Program,

1 commensurate with the DSM 13 Month Filing. That information is also provided as a part of
2 this filing. Finally, in Decision No. 68064, the Commission addressed the DSM Consumer
3 Products Program and approved funding for compact fluorescent lightbulbs ("CFLs"). As part of
4 this filing, the Company is seeking authorization for the reallocation of funding to that program.

5 The Company is now seeking final approval of its Non-Residential DSM Programs. In
6 addition, based on the knowledge and experience it gained during the first twelve months of
7 implementation, APS is seeking Commission approval of certain modifications to the DSM
8 programs as discussed in detail in the DSM 13 Month Filing to further customer participation in
9 these cost effective energy efficiency programs. The Company is requesting consolidation of
10 these matters.

11 **II. BACKGROUND**

12 In April 2005, the Arizona Corporation Commission ("Commission") adopted a
13 settlement agreement that obligated APS to spend at least \$48 million on approved eligible
14 DSM-related items during the calendar years 2005-2007 (Decision No. 67744). In that Decision,
15 the Commission adopted a preliminary DSM plan and ordered APS to submit a final DSM plan
16 within 120 days. In July 2005, APS filed for approval of its comprehensive DSM Portfolio Plan
17 to implement a portfolio of energy-efficiency DSM programs that would "reduce the use of
18 electricity by means of energy-efficiency products, services or practices."¹ The proposed
19 programs were designed to influence consumers' decisions about energy-efficiency products,
20 services and practices through a combination of rebates and incentives, technical assistance and
21 training, and consumer education. The DSM Portfolio Plan, which addressed both non-
22 residential and residential DSM programs, was created in conjunction with a collaborative group
23 of DSM experts and stakeholder representatives (the "Collaborative").² The Non-Residential
24 Programs included in the Portfolio Plan were designed for schools, commercial, industrial, and
25 small business customers, and included programs for new construction and for the retrofitting of
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27 ¹ This is the definition for "energy efficiency" as stated in Decision No. 67744, Attachment A, paragraph 40.

28 ² The Collaborative, included members of Commission Staff, the Residential Utility Consumer's Office, the Southwest Energy Efficiency Project, Western Resource Advocates, the Department of Commerce Energy Office, Arizonans for Electric Choice and Competition and others.

1 existing facilities. Also included were provisions for measurement and evaluation of the DSM
2 programs, as well as funding for research, and an annual performance incentive.

3 As anticipated, the Non-Residential DSM Programs have produced long-term energy
4 consumption and demand savings in the initial start-up phase, and it is anticipated that over the
5 expected lifetime of the currently approved Non-Residential DSM measures, those savings will
6 significantly increase. APS customers have been actively participating in the Commission-
7 approved DSM programs; the resulting energy savings is a benefit to themselves and the APS
8 electric system, as well as the environment. The energy efficiency measures installed to date as a
9 result the Company's Non-Residential DSM Programs total nearly 2.5MW and a lifetime savings
10 of over 240,000 MWh. These savings will increase as the program continues to mature. The
11 early success of the program has been aided by the greater public awareness of the need for
12 conservation and protection of the environment. In addition, the Non-Residential DSM Programs
13 have and will continue to produce other societal benefits, such as reduced water use, air
14 emissions reductions, and increased consumer awareness about conservation and energy
15 efficiency.

16 **III. OVERVIEW AND STATUS OF NON-RESIDENTIAL DSM PROGRAMS**

17 **A. Schools Program**

18 The Schools Program was designed to provide assistance for reducing energy use in
19 school buildings (public, private, and charter schools), and includes financial incentives that will
20 be paid to schools to assist with the cost of energy-efficiency upgrades. The Schools Program
21 budget is reserved exclusively for school use. In addition, if a school reaches the cap on
22 incentives under the School Program budget, the school can participate in any of the other Non-
23 Residential Programs. All cost-effective energy-efficiency projects for schools were considered
24 with an initial emphasis on upgrading lighting, design assistance, building operator training, and
25 energy education. A total of 13 projects from 5 different school districts were completed during
26 the initial 12 month period. APS estimates that this resulted in 0.13 MW capacity savings and a
27 lifetime savings of 14,686 MWh is anticipated.
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1 **B. New Construction Program**

2 The New Construction Program includes three components: design assistance, custom
3 efficiency and prescriptive measures. Design assistance involves efforts to integrate energy-
4 efficient improvements into a customer design process to influence equipment/systems selection
5 and specification as early in the design process as possible. Custom efficiency incentives
6 provide the opportunity to implement energy-efficiency measures not covered by prescriptive
7 incentives for large non-residential customers, and provide for feasibility studies to assess the
8 savings from complex applications. The prescriptive measures specify the incentives provided to
9 consumers for energy-efficiency improvements in lighting, HVAC, motor upgrades, and
10 refrigeration measures. To date, the Company has received 31 applications for this program,
11 including eight from school districts. Because of the extended time it takes to design and
12 construct new facilities, the full impact of these projects has not yet been realized. Projects
13 completed during the initial 12-month period resulted in 0.16 MW capacity savings and are
14 anticipated to have a lifetime savings of 20,315 MWh.

15 **C. Non-Residential Existing Facilities**

16 The Non-Residential Existing Facilities Program provides prescriptive incentives to APS
17 customers with large non-residential facilities for energy-efficiency improvements in lighting,
18 HVAC, motors, and refrigeration measures. The program also provides custom incentives for
19 the implementation of energy-efficiency measures that are not specifically covered in the
20 prescriptive incentives. In addition, the program subsidizes the cost of retro-commissioning
21 projects to systematically optimize the operation of existing buildings, and provides training and
22 technical assistance for commercial contractors and education for facility owners and operators.
23 The Non-Residential Existing Facilities program transitioned from the start-up phase to the
24 implementation phase during this reporting period, and has generated considerable customer
25 interest and activity. As of February 28, 2007, more than \$850,000 have been paid in incentives
26 to nearly 30 customers. To date, the Company has received a total of 244 applications for this
27 program. Large school districts submitted 35 of these applications. Due to the strong demand
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1 for the program, APS utilized the budget flexibility authorized by the Commission in Decision
2 No. 68488 and reallocated funds from other Non-Residential DSM programs to the Existing
3 Facilities Program, as of January 1, 2007. In the first two months of 2007, five customers have
4 submitted applications that will bring their requested incentives close to or above the \$300,000
5 cap. During the initial 12-month period, this program has resulted in 2.00 MW of capacity
6 savings, and a lifetime savings of 189,982 MWh is anticipated.

7 **D. Small Non-Residential DSM Program**

8 This program provides prescriptive incentives to small non-residential customers for
9 energy-efficiency improvements in lighting, HVAC, motors, and refrigeration applications
10 through a straightforward program participation mechanism. The program supports the
11 installation of energy-efficiency equipment and simplifies the process for small non-residential
12 customers. The program also includes training for contractors and promotion of commercial
13 qualified contractors. Educational materials are provided to assist building owners and operators
14 in making decisions about how to improve the energy efficiency of their facilities. In this
15 reporting period, the Company has received a total of 49 applications under this program. In the
16 initial 12-month period, this program has resulted in 0.14 MW of capacity savings, and lifetime
17 savings of 11,336 MWh is anticipated. The Company has found that developing customer
18 awareness and engaging this sector in the energy efficiency programs to be challenging. For
19 these reasons, as discussed in Section IV (G) below, the Company is proposing program changes
20 to achieve higher penetration levels in this market segment.

21 **E. Building Operator Training Program**

22 The Building Operator Training ("BOT") program assists building operators and facility
23 maintenance personnel to better understand how their facilities use energy and how to better
24 manage energy costs, and provides subsidized training for building operators and facility
25 maintenance technicians on energy-efficient building operating and maintenance practices.
26 Participants learn the benefits of purchasing high-efficiency equipment, as well as proper
27 equipment operation and maintenance practices to improve efficiency. In the initial 12-month
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1 period, 21 customer participants received a BOT Certificate of Completion, and 26 customer
2 participants successfully completed the Facilities Maintenance training. APS estimates that this
3 resulted in 0.05 MW of capacity savings, and a lifetime savings of 5,200 MWh is anticipated.

4 **F. Energy Information Services Program**

5 This program is a web-based energy information tool, which includes real time (or near
6 real time) feedback on customer energy consumption and load profiles. Facility energy
7 managers that participate in this program receive tools to graphically analyze consumption
8 trends, compare multiple facilities, benchmark their performance, and track their energy-
9 efficiency efforts. The program supports the cost of providing the energy information service to
10 large non-residential customers. During the initial 12-month period, the Company issued a
11 Request for Proposals ("RFP"), and successfully engaged an implementation contractor for the
12 EIS Program. The program was launched in mid-November, and to date, no customers have
13 applied.

14 **G. Performance Incentive**

15 Decision No. 67744 provided for a performance incentive for APS, which is based on a
16 share of net economic benefits from the energy-efficiency DSM programs.³ For the years 2005
17 through 2007, the performance incentive will be capped at \$4.8 million, which is 10% of the
18 total amount of DSM spending (inclusive of the performance incentive) ordered in Decision No.
19 67744. APS sought approval of the Company's performance incentive in its filing application
20 for approval of its DSM Portfolio Plan filed in July 2005. During the Company's pending rate
21 case,⁴ the issue of the DSM performance incentive was raised and discussed in testimony. As a
22 result, the resolution of this issue is still pending.

23 **IV. PROPOSED MODIFICATIONS TO THE NON-RESIDENTIAL DSM**
24 **PROGRAMS**

25 This initial 12 month period has allowed the Company the opportunity to assess the
26 potential for improving the market penetration of energy-efficient technologies and practices,

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³ See Decision No. 67744 at 20.

28 ⁴ Docket No. E-01345A-05-0816.

1 further develop program details, and to gather data based on actual experience with the
2 programs. As a result, the Company has concluded that a number of modifications to the Non-
3 Residential DSM programs would facilitate customer participation and maximize cost
4 effectiveness. Additionally, the Company is recommending modifications to the Residential
5 HVAC Program and seeking the reallocation of funding within the Consumer Products Program.
6 The DSM 13 Month Filing fully discusses these proposals; the following is an overview.

7 **A. Overall Program Modifications**

8 **1. Budgeting Flexibility for the Existing Facility Program**

9 As the Non-Residential Programs have been implemented, the Company has found that
10 some of the programs, particularly the Existing Facilities Program, have been widely received
11 and participation levels are very strong. Decision No. 68488 provided the Company with some
12 budget flexibility, authorizing the Company to reallocate up to 25% of its program budgets
13 between programs, which was done for the Non-Residential programs as of January 1, 2007.
14 Despite this reallocation, funding for the Non-Residential Existing Facilities Program is already
15 80% reserved, with only one year of operation. Based on recent application activity for this
16 program, the Company anticipates that the Existing Facility program budget cap could be
17 reached by June 2007. Therefore, to allow for continued subscription to this popular and
18 effective program, the Company is now requesting that the budget cap for the Existing Facility
19 program be removed. Timely approval for removal of this budget ceiling is essential to meet the
20 customer demand for the Existing Facilities Program.

21 **2. Restriction on Customer Incentives**

22 The Company believes that the most effective DSM programs provide an appropriate
23 level of incentive to the customers to make energy efficient choices. Decision No. 68488
24 restricted the combined expenditure for rebates and customer incentives to a maximum of 52%
25 of the overall budget. Based on the knowledge and experience gained during this initial 12
26 month period regarding market participation, in addition to the fact that as the programs mature,
27 development costs will decline and economies of scale will be obtained, the Company is
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1 requesting the Commission to eliminate this restriction. This will allow APS to adjust incentives
2 to meet program objectives and reach all classes of customers.

3 **3. Planning and Administration Budget Cap**

4 In Decision No. 68488, the Commission specified that the budget for Planning and
5 Administration functions could not exceed 10% of the total program budget⁵, but limited the
6 amount of recovery in the initial 12 month period to a maximum of \$1 million, noting that the
7 Company could request the remaining Planning and Administration expenses in the 13 month
8 filing. The Company believes that the \$1 million cap was intended to be a temporary limitation,
9 and as part of this filing is seeking removal of that the limitation. As discussed in the DSM 13
10 Month Filing, the Company has effectively managed the planning and administration of these
11 programs, and has expended less than the \$1 million during the initial period. However, as the
12 Non-Residential DSM Programs expand and mature over time, the Company expects to reach
13 and exceed the \$1 million maximum. Therefore, APS requests that the \$1 million limitation be
14 eliminated, leaving the maximum of 10% of total program budget for planning and
15 administration costs in place.

16 **4. Extend Programs to Property Owners in APS Service Territory**

17 Currently, all of the DSM Programs have been approved to allow only APS customers to
18 participate. The Company believes that the DSM Programs should extend to owners of facilities
19 that are located in APS service territory, if they lease or rent facilities to APS customers. As
20 tenants, the APS customers generally would not be responsible for installing energy efficient
21 measures. However, if the owners of the property had the incentive to do so, the APS customers
22 and the APS electric system would benefit, and societal benefits would accrue.

23 **5. Review of Marketing Materials**

24 Decision No. 68488 required the Company to submit all marketing materials for Staff
25 review within 30 days of their development, which the Company has done. APS believes that
26 this process has provided Staff with the Company's approach to marketing to its Non-Residential
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28 ⁵ This is consistent with Decision No. 68648, which addressed the Residential DSM programs.

1 customers. APS is now seeking to modify this requirement with the final program approval.
2 The Company is seeking authorization to provide samples of the Non-Residential marketing
3 materials with the DSM Semi-Annual Report, as would be consistent with other approved DSM
4 programs. *See* Decision No. 68647 (Low Income Programs) and Decision No. 68648
5 (Residential Programs).

6 **B. Prescriptive Measures Revisions**

7 Based on results from this initial 12 month period, the Company has performed a
8 comprehensive review on the assumptions and performance factors of the prescriptive measures
9 in the Non-Residential DSM Programs. This included a review and update of technology
10 configurations and sizes, demand and energy performance factors, operating factors, customer
11 costs, and measure cost-effectiveness. APS has utilized three main resources in updating all
12 program measures which included, but were not limited to, APS' recently completed Baseline
13 Study and Market Potential Studies; implementation results during the first twelve months of
14 operation; and initial Measurement, Evaluation, and Research contractor findings and research.

15 As a result of these analyzes, the Company is proposing updates to its prescriptive list of
16 measures offered, which includes HVAC, motors, variable speed drives, and refrigeration
17 measures. The Company has revised TRC benefit and cost calculations, and has also updated
18 customer incremental and installed costs for all measures.

19 **C. HVAC Performance Criteria**

20 Based on a detailed analysis of demand and energy savings, incremental cost, and cost-
21 effectiveness of high efficiency air conditioning equipment, the Company has concluded that the
22 SEER value should be the only required energy efficiency indicator for HVAC units equal to or
23 less than 5 tons. This analysis found that the more favorable cost effectiveness values, based on
24 an analysis of product performance from various product databases, indicated that an EER
25 requirement can be eliminated and still maintain the cost-effectiveness of a program. The
26 difficulty of determining EER values is due to the reluctance of manufacturers to release this
27 information. The EER analysis is currently required under both the Non-Residential and
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1 Residential DSM Programs and this requirement has limited the number of HVAC units that are
2 qualified for incentives. This has frustrated both customers and local contractors. During the
3 initial 12-month period, the Company has found that the uncertainty generated from lack of
4 information and knowledge of EER values created hurdles to participation in DSM Programs by
5 customers and their contractors. For these reasons, the Company is requesting that the
6 Commission approve the elimination of the EER values as a HVAC performance criterion for
7 units of 5 tons or less, for both the Non-Residential and Residential DSM Programs.

8 **D. Funding for Compact Fluorescent Lightbulbs ("CFL")**

9 In Decision No. 68064, the Commission reviewed the Company's proposed Consumer
10 Products Program and authorized funding for CFLs. However, the Commission did not
11 authorize funding for the promotion of Energy Star appliances, which was funded at a total of
12 \$330,000 for the 2005-2007 program planning period. APS is now requesting that the
13 Commission authorize the Company to reallocate those funds that were earmarked for appliances
14 to the CFL measure of the Consumer Products Program.

15 **E. Study Incentive Enhancements**

16 To further facilitate participation in the Non-Residential DSM programs, the Company is
17 proposing that the technical and study incentives for energy feasibility, design assistance retro-
18 commissioning and commissioning for large customers be modified. Specifically, the Company
19 is recommending that the annual technical and study incentive, which has a **\$10,000 per**
20 **customer** limitation, be changed to a **\$10,000 per facility** maximum. Additionally, because
21 retro-commissioning studies are more labor intensive and result in direct kWh energy savings
22 once implemented, as compared to other studies, the Company is recommending that the \$10,000
23 limit **per customer** be increased to **\$20,000 per facility**.

24 **F. Custom Application Enhancements**

25 The Non-Residential DSM incentive program currently has separate incentives for
26 prescriptive and custom measures. If a customer utilizes both types of measures, the customer
27 must submit separate applications and provide separate documentation for each. The Company
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1 is proposing that in cases where there is an integrated building energy simulation that quantifies
2 the energy savings through the Custom Program, that prescriptive and custom measures would
3 be allowed to be presented in one custom application and treated as a single custom measure.
4 This change will simplify the application process for customers, and will not increase the
5 likelihood that any measures would be double-counted during application processing.

6 **G. Small Business Program Enhancements**

7 APS has had limited success in reaching small business participants, despite its specific
8 efforts to engage these customers. As a result, the Company is proposing modifications to the
9 current small Non-Residential DSM Program to address specific barriers to participation for the
10 very small business customers. These modifications include: 1) modify the "small business
11 customer" classification to include customers that have 100kW or less monthly aggregated
12 billing demand; 2) reallocate the program budget in future DSM planning years to reflect the
13 reduction in the size qualification; 3) include all new construction projects under the New
14 Construction program, regardless of customer size; 4) allow both direct-install retrofit incentives
15 and replace-on-burnout incentives; 5) increase the incentives above 75% for various retrofit
16 measures to encourage contractors to participate in direct-install services to small businesses; and
17 6) utilize an on-line proposal generation and project tracking application for direct-install
18 projects to reduce the transaction costs.

19 **H. EIS Incentive Enhancement**

20 The current customer incentive caps for the EIS Program were designed based on a single
21 meter EIS application, which would cost a maximum of \$1,200. This resulted in a maximum
22 incentive per customer of \$900. However, most non-residential customers have more than one
23 meter. For that reason, APS recommends that the limitation on this program be raised to
24 recognize the fact that program participants are likely to install EIS on multiple meters within
25 their domain. As a result, the Company is now recommending that the maximum for the EIS
26 Program for any one customer would be \$12,000 annually.
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V. CONCLUSION

1. Provides final approval for the Company's Non-Residential DSM programs; and
2. Authorizes the modifications discussed above to the Company's Non-Residential, Residential and Consumer Products programs.

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Exhibit A



APS
Non-Residential DSM
Programs
13 Month Filing

March 23, 2007

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Appendix A – Current Non-Residential Program Incentives

I. Executive Summary

The objective of this filing is to achieve final approval of Arizona Public Service Company's ("APS" or the "Company") Non-Residential Demand Side Management ("DSM") programs ("Non-Residential Programs"), as required in Decision No. 68488. The Non-Residential Programs received interim approval from the Arizona Corporation Commission ("Commission" or "ACC") in February 2006, and these programs were launched in March 2006, soon after interim approval was granted and the Company began processing applications in July 2006.

APS and the DSM Collaborative Working Group have discussed the contents of this report, including the program enhancements, and believe that final ACC approval of these Non-Residential Programs will benefit customers, the APS system, and society in general. All of the Non-Residential Programs will have a positive net benefit as customer participation increases after the initial ramp up period. The information provided in this filing includes the latest information available from APS' Baseline Study, the Market Potential Study, the initial implementation experience during the first twelve months since ACC approval, and initial field results reported by APS' Measurement and Evaluation contractor.

APS acknowledges the efforts of the DSM Collaborative Working Group members for their participation and recommendations in the development of this 13 Month Filing Report. The DSM 13 month Filing reflects many of the recommendations of Collaborative members.

As required in Decision No. 68488, APS filed its Non-Residential DSM Marketing & Communications Plan, and Schools Supplemental Marketing and Communications Plan on May 25, 2006. These detailed plans identified multiple channels of distribution to market, which includes leveraging relationships with vendors, associations and direct communications and contact with APS customers. Implementing the plan has increased DSM program awareness for trade allies, customers, industry contacts, and others who can refer prospective participants to the APS Solutions for Business Program.

To accomplish these marketing goals, the following efforts to promote participation in the Solutions for Business Program included:

- Creating trade ally awareness through training and recruitment;
- Leveraging existing key account relationships through training and one-on-one meetings to create program awareness and participation;
- Participation in key trade shows, events and public relations outreach targeted toward each program;
- Outreach and assistance to engage key trade associations.

So far, APS has successfully reached and engaged trade allies, including lighting and heat, ventilating and air conditioning ("HVAC") contractors, architects and energy engineering firms, and energy auditing firms, as well as large existing customers, to participate in the DSM programs. APS will continue to promote the "Solutions for Business" Program and focus its

efforts to increase participation in the Small Business and New Construction Programs as detailed later in this filing. For convenience purposes, APS' current Solutions for Business Program applications are attached as Exhibit A to this report.

Because of these marketing efforts and response of customers, APS Non-Residential Programs have achieved 2.5 MW of capacity savings, which equates to 242,000 lifetime MWh savings. The net benefits to date for these programs are \$588,000. APS anticipates that they will ultimately achieve the net benefit of \$68 million for all DSM programs, as reported in the Company's DSM Portfolio Plan submitted on July 1, 2005 ("Portfolio Plan").

APS reports \$4.2 Million of spending activity for the Non-Residential Programs for the 12 months ending February 28, 2007. These expenditures reflect the realities of DSM program start-up costs and funds needed to adequately plan, develop, and deliver quality programs. This report recognizes program planning and ramp-up costs over the 2005-2007 program planning and initial ramp-up period. Most of the Non-Residential Programs were launched in March 2006 and the Company began processing applications in July 2006. As a result, this report covers less than one full year of program implementation in the field.

APS has seen the most customer activity in the Existing Facilities Program; customer interest in this program has been very strong. APS utilized the budget flexibility granted in Decision No. 68488 in response to customer demand in the Existing Facilities Program. Therefore, on January 1, 2007, the Company shifted 25% of each of the Small Business Program and Large New Construction Program funds to the Existing Facilities Program to meet the expected customer demand for the 2007 budget year. As of February 28, 2007, over 40% of the 2005-2007 Existing Facilities Program incentive budget was either paid to customers or reserved for customers with pre-approved applications. Even more significant, when the remaining Existing Facilities Program applications are included, it totals over 80% of the incentive dollars available, for the entire three year adjusted Existing Facilities Program incentive budget. The remaining Non-Residential Programs are still in early ramp up and will see positive benefits as customer participation increases.

This report describes the proposed revisions and updates to the existing prescriptive measures. The basis of the energy analysis included inputs from:

- APS' recently completed Baseline and Market Potential Studies;
- Experience from the first year of implementation;
- Information from various industry sources and databases;
- Specifications from manufacturers, vendors, and suppliers;
- DSM Collaborative Working Group.

APS verified that each of the existing measures pass the benefit-cost Total Resource Cost ("TRC") test although some measures did require some minor modifications.

APS is currently working with the Electric League of Arizona to expand the reach of the APS Qualified Contractor program outside the Phoenix metropolitan area through training and marketing the program to contractors outside of the metro area.

In addition to the existing measures, APS recommends the following enhancements to the Residential and Non-Residential Programs.

Exhibit 1
DSM Program Enhancements

Measure/Program	Change	Rationale
All Programs	Eliminate Budget Ceiling for Existing Facilities Program	<ul style="list-style-type: none"> APS utilized the currently approved 25% budget flexibility Remove the budget ceiling for the Existing Facilities Program to address high demand
All Programs	Remove 52% Restriction for Customer Incentives	<ul style="list-style-type: none"> Measures are all cost effective Programs are through the initial start-up phase Providing as much customer incentive funding as possible to customers further facilitates the overall goals of energy efficiency.
All Programs	Remove \$1M cap for Planning & Administration	<ul style="list-style-type: none"> Currently under the \$1 million cap 10% Cap can be maintained for future annual budgets
All Programs	Open up program participation to include property owners of facilities within APS service territory.	All programs as written and approved, allow for APS customer participation but does not allow for participation of facility owners that lease to APS customers. The purpose of these programs is to influence both owners and APS customers to install energy efficient technologies.
Marketing Material Submission	Decision No. 68488 directed APS to submit "all marketing materials for Staff review within 30 days of the development of each piece". Company is requesting that future marketing material be submitted with the Semi-Annual Reports similar to the other DSM programs.	<ul style="list-style-type: none"> APS has met this filing requirement during the first 12 months of implementation. APS believes these filings provide an understanding of the Company's Non-Residential Program marketing materials look and feel.
Consumer Products	APS requests that \$330,000 should be re-allocated to the Compact Florescent Lightbulbs ("CFL") measure of the Consumer Products program.	As the Consumer Products program was filed, it included funding for promotion of Energy Star appliances. This component of the program was not approved by the ACC.
HVAC – Small Package Units (Residential and Non-Residential Programs)	Qualifying Efficiency to be based solely on Seasonal Energy-Efficiency Rating ("SEER").	<ul style="list-style-type: none"> TRC cost effectiveness analysis supports removal of Energy-Efficiency Rating ("EER") requirement EER rating has been difficult to find for customers and contractors. Savings will be verified through the Monitoring and Evaluation process
Studies (not Retro-commissioning)	<ul style="list-style-type: none"> \$10,000 limit per customer changed to \$10,000 limit per facility Design Assistance has no associated energy savings 	<ul style="list-style-type: none"> Studies are important to identify savings opportunities Changing the cap basis to a facility rather than a customer basis recognizes the fact that there may be a number of large customers that have more than one facility Design Assistance by itself does not typically yield energy savings. These savings will be recognized through application of prescriptive and custom measures.
Retro-commissioning	<ul style="list-style-type: none"> \$10,000 limit per customer changed to \$20,000 limit per facility Include associated energy savings 	<ul style="list-style-type: none"> Increasing the cap recognizes the fact that Retro-Commissioning is much more labor intensive as compared to other studies Changing the cap basis to a facility rather than a customer basis recognizes the fact that there may be a number of large customers that have more than one facility Retro-Commissioning does yield direct energy savings.

Measure/Program	Change	Rationale
Custom Program	For integrated energy analysis - give customers the option to choose Custom program or break out prescriptive measures	<ul style="list-style-type: none"> Implementation procedures in place to ensure that there is no double counting of customer incentive payments Reduce customer program complexity Energy Simulation used in Custom program yield more accurate energy savings estimates than prescriptive measure estimates Reduced program administration and implementation costs Each Custom project is verified to meet TRC test
Small Business Program	<ul style="list-style-type: none"> Change size category from less than 200 kW and smaller to 100 kW and smaller Reallocate budget to reflect the size of the small customer grouping Provide a direct install program where APS provides trade allies a direct incentive to implement lighting and refrigeration measures at customers' facilities Direct install incentive to be based on kWh savings Include all Small Business new construction under the New Construction program 	<ul style="list-style-type: none"> Existing program participation low Provides focus on the smallest customers with the greatest barriers Addresses small customer barriers to participation Reduced trade ally transaction cost Simplify customer energy efficiency buying decision Reduced program administration and implementation costs
EIS	Increase incentive cap from \$900 per customer to \$12,000 per customer for multi-site customers, and maintain cap at 75% of cost	<ul style="list-style-type: none"> Recognizes that large customers have multiple meters Maintain total large customer cap of \$300,000/yr
Additional Prescriptive Measures	<ul style="list-style-type: none"> Hard-wired CFLs Induction Lighting Cold Cathode Lighting Reduced Lighting Power Density (New Construction Only) Package Terminal Air Conditioners/Heat Pumps Water-Source Heat Pumps Economizers Cool Roof Applications High Performance Glazing 	<ul style="list-style-type: none"> Each measure TRC greater than 1 Simplifies customer application for these technologies Reduced program implementation and program costs

In conclusion, APS has submitted this DSM 13 Month Filing in compliance with Decision No. 68488 and is seeking final approval of its Non-Residential Programs. The Company has incorporated experience from the first 12 months since the Company was granted interim approval for its Non-Residential Programs, including initial ramp-up and implementation of the programs, the results of the recently completed Baseline and Market Potential Studies and initial Measurement Evaluation Research ("MER") findings into this report, to support its request for final approval. APS has recommended modifications to some of the Non-Residential Program offerings, including the revision of some prescriptive measures and additional cost-effective measures. These program enhancements will encourage more customers to participate in energy efficiency projects, especially in those hard to reach segments like small business.

These additional measures and program enhancements have been thoroughly analyzed and are economically sound. Therefore, APS respectfully requests that these enhancements be approved as part of the final approval of these programs.

II. Introduction

On February 23, 2006, the ACC provided interim approval in Decision No. 68488 for APS' Non-Residential portion of its Portfolio Plan with certain program modifications and requirements. ACC Staff recommended interim approval based on their assessment that many program details were not available at the time, because these programs were new and lacked certainty and specificity. Staff recommended that within 13 months of the Commission's Decision, APS should refile the non-residential portion of its Portfolio Plan, with 12 months of actual data, for final Commission approval.

Staff observed that during the final approval, the Commission will have the benefit of the results of the Baseline Study, which was approved in Decision No. 67816. In that Decision, the ACC pre-approved the expenditure of DSM funds for a Baseline and Market Assessment study, which would provide reliable information on the market potential, kW and kWh savings potential and costs associated with energy-efficiency technologies. Specifically, the DSM study assesses the potential for improving the market penetration of energy-efficient technologies and practices in residential and non-residential customer segments. The study information will be used to confirm program design assumptions and to target programs to maximize cost effectiveness.

The objective of this filing is to achieve final approval of these Non-Residential Programs. As part of this filing, the Company is also requesting additional modifications and providing further clarification in the following areas:

- Existing Facilities Program budget ceiling
- Marketing material submission
- Administration budget restrictions
- Customer incentive budget restrictions
- Owner/tenant customer/participant definition

In addition to addressing the Non-Residential Programs, this filing also addresses the following Residential Program issues:

- HVAC program changes in the SEER/EER requirements
- CFL funding

III. Description of Non-Residential Programs

The Non-Residential Program portfolio, as filed in the Portfolio Plan and given interim approval in Decision No. 68488, includes a balanced mix of programs to address a diversity of APS non-residential customer segments with the intention that all retail non-residential customer classes and segments have an opportunity to benefit from at least one DSM program. Non-residential market opportunities include existing buildings, new construction and renovation, small business, and schools. The Non-Residential Programs include:

- Existing Facilities Customers (greater than 200 kW aggregated monthly billed demand)
- Large New Construction and Major Renovation (greater than 200 kW aggregated monthly billed demand)
- Small Business (\leq 200 kW aggregated monthly billed demand)
- Schools

- Building Operator Training
- Energy Information Services

The following is a brief description of each of these Non-Residential Programs.

Existing Facilities

This program provides prescriptive incentives to owners and operators of large non-residential facilities for energy-efficiency improvements in lighting, HVAC, motors, and refrigeration measures. The program provides custom incentives for implementation of energy-efficiency measures not covered by the prescriptive list. In addition, the program defrays the cost of retro-commissioning projects to systematically optimize the operation of existing buildings. The program also provides training and technical assistance for commercial contractors and education for facility owners and operators.

New Construction and Major Renovation

This program includes three components: design assistance, custom efficiency, and prescriptive measures. Design assistance involves efforts to integrate energy-efficiency into a customer's design process to influence equipment/systems selection, and specification as early in the design process as possible. Custom efficiency provides the opportunity to implement energy-efficiency measures not covered by prescriptive incentives for large non-residential customers and provides for feasibility studies to assess the savings from complex applications. A list of prescriptive measures and incentives is provided for energy-efficiency improvements in lighting, HVAC, motor upgrades, and refrigeration measures.

Small Business

This program provides prescriptive incentives to small non-residential customers for energy-efficiency improvements in lighting, HVAC, motors, and refrigeration applications through a straightforward mechanism for program participation. The program also includes training for contractors and promotion of commercial qualified contractors. The program supports "one-source" energy audits and the installation of energy-efficiency equipment to make the process simple for small non-residential customers. The program also provides educational materials to assist building owners and operators in making decisions to improve the energy-efficiency of their facilities.

Schools

This program is designed to provide assistance in reducing the energy used in public school buildings, including public, private, and charter schools. The program includes financial incentives that will be paid to help schools afford the cost of energy-efficiency upgrades. This program budget is reserved exclusively for school use. If a school reaches its cap within the school program, they can participate in other Non-Residential Programs. All cost-effective energy-efficiency projects for schools are considered with an initial emphasis on upgrading lighting, in addition to providing design assistance, building operator training, and energy education. Lighting consumes 30% of the electricity used by schools. Installing energy efficient lights can reduce lighting costs by up to 30%, resulting in a reduction of up to 9% in the overall school electric bill when all lights are upgraded.

Building Operator Training

This program provides subsidized training for building operators (managers) and facility maintenance technicians on energy-efficient building operating and maintenance practices. The program is designed to help building operators and facility maintenance personnel better understand how their facilities use energy and how to better manage energy costs. Participants learn the benefits of purchasing high-efficiency equipment, as well as equipment operation and maintenance practices to improve efficiency.

Energy Information Services ("EIS")

This program provides a web-based energy information tool, which includes near real time feedback on customer energy consumption and load profiles. Large facility energy managers will receive tools to graphically analyze consumption trends, compare multiple facilities, benchmark their performance, and track their energy-efficiency efforts. The program supports the cost of setting up the energy information service and offers the monitoring service for a small price to large non-residential customers.

IV. Non-Residential DSM Team

Soon after the approval of the Non-Residential Programs by the ACC, APS retained KEMA through a competitive Requests for Proposal ("RFP") process to provide turn-key implementation for all of the Non-Residential Programs (with the exception of Building Operator Training and Energy Information Services). KEMA is well qualified to do this work given their experience in implementing similar programs throughout the western United States. The Arizona Department of Commerce – Energy Office is also under contract to provide DSM outreach to school districts, especially rural school districts.

APS engaged Summit Blue Consulting, LLC to provide MER services for all DSM programs, excluding the Low Income Program. Summit Blue and their team have strong experience in the measurement and evaluation field, and have the added benefit of knowing the APS programs through their work with APS in the DSM program development stage.

Automated Energy, Inc. was selected through a competitive RFP process to provide turn-key implementation of the EIS Program.

APS also selected ICF International Consulting through a competitive RFP process to complete a Baseline and Market Potential Study. The study findings were utilized as part of this report to re-evaluate end-use measures currently offered, and develop new measures proposed as enhancements in the Non-Residential Programs. For all programs, APS retains responsibility for program oversight, program administration and reporting activities.

V. ACC Requirements and APS Response

In Decision No. 68488, the Commission adopted Staff recommendations that APS refile the Non-Residential Programs and other specific recommendations. The following table outlines those ACC requirements and APS responses:

Exhibit 2
ACC Requirements/APS Response

	ACC Requirement	APS Response
c	"Staff has recommended that the 13-month filing of the Non-Residential Programs should include information on the status of the programs..."	Section VI fully documents APS Non-Residential Programs first year of start-up and implementation activities.
c	"... and explain changes that were made to budgets, incentive levels, and program implementation."	Section VI fully documents APS Non-Residential Programs utilization of budget flexibility. Section VII provides all program spending and budget details. In the Existing Facilities Program, APS is proposing to remove the Budget Ceiling.
c	"The study should include Societal Cost Test analyses utilizing the new baseline data."	Section IX, Prescriptive Measures Update and Revisions, explains the rationale of the updated TRC analysis and outcomes.
i	"Staff has recommended that APS provide information about the level of school participation in all DSM programs..."	Section VI provides schools' participation in all Non-Residential Programs
j	"Staff has recommended that APS track the use of Schools Program funds by size of school entity and report such findings..."	Section VI, Exhibit 6 describes school participation by size.
k	"APS should provide information about its efforts to increase funding for schools..."	If any school reaches the Schools Program funding limit, as ordered by the Commission, they are now eligible to participate in the other Non-Residential Programs. No school projects were limited by the total funding program cap in 2006; however, one school district has already submitted applications for over the \$300,000 cap in 2007. It is unknown at this time if this school will exceed the \$300,000 cap once the project applications are finalized. Therefore, there is no need to increase program funding for schools at this time.
l	"Staff has also recommended that if in the future APS would like to provide for an override of the Schools program incentive cap, it should provide such details..."	No need to change the Schools incentive cap of \$25,000 per district or \$15 per student at this time. Schools that exceed this cap are then allowed to participate in any other Non-Residential DSM Program with higher customer caps as described in m & n below.
m	"Staff has also recommended that if in the future APS would like to provide for an override of the NR Existing incentive cap or the NR New incentive cap, it should provide such details..."	No need to change the NR existing incentive cap or the NR new incentive cap at this time. The current customer cap for each of these programs is \$300,000 and only a few applications have reached this level to date.
n	"Staff has also recommended that if, in the future, APS would like to provide for an override of the NR small cap, it should provide such details..."	No need to change the NR small customer cap of \$150,000 at this time.
o	"Staff has recommended that APS identify the number of instances that incentives were paid for studies for which associated projects were not completed through the verification process."	See Section VI -- there has been one study completed representing \$2,325 of study incentives paid. To date, no applications have been submitted for incentives as a result of this study.
r	"Staff has further recommended that APS provide copies of all marketing materials for Staff review within 30 days of the development of each piece"	APS has met this filing requirement during the first 12 months of implementation, and is now seeking to modify this requirement to provide a sample of marketing materials with the Semi-annual Report. See Section VIII for the rationale for this request.
t	"Staff has recommended that all financial incentive be capped at a maximum of 75 percent of incremental cost. Staff further recommended that incentives that are proposed to be capped at 50% in APS' Application remain capped at 50%."	Before the Non-Residential Programs were launched in 2006, all individual prescriptive measure incentive values were calibrated to ensure that the incentive to incremental cost ratio was equal to or less than 75%. APS has reevaluated each of the existing prescriptive measures in the program as discussed in Section IX. In addition, we provide the incentive to incremental cost ratio test for each new recommended prescriptive measure as discussed in Section XI.F. Incentives for all custom projects in the program are capped at 50% of the project incremental cost. All study incentives are set at 50% of study cost not to exceed \$10,000 (\$20,000 for Retro-Commissioning) - See

	ACC Requirement	APS Response
		Study Enhancements, Section XI.B. The one exception in this proposal to this 75% requirement is the Small Business Direct Install program. A higher incentive is needed to move these customers to implement DSM projects. See Section XI.D – Small Business Program.
u	“Staff has recommended that Program and Administration costs for any given program, such as NR New, not exceed 10 percent of the total program budget.”	Planning and Administration cost for the initial 12 month period was 4% of the total Non-Residential total budget cost – See Exhibit 13 for Planning and Administration spending details.
v	“Staff has recommended that the combined expenditures for Rebates and Incentives for the Non-Residential Programs from 2005 to 2007 be capped at the current estimated level, which is 52 percent of the overall budget.	For the 12 months ending February 28 2007, the Non-Residential Rebates and Incentives paid divided by the total Non-Residential spending was 24.5% – See Section VII, Exhibit 11. However, APS proposes that the restriction on incentives be removed as all measures in the Non-Residential Programs are cost effective and paying more incentives is consistent with mature programs in other jurisdictions.
w	“Staff has recommended that APS should be limited to shifting a maximum of 25 percent of budgeted funds from one program to another program in the same sector per calendar year.”	APS has shifted 25% of the Small Business and New Construction Programs to the Existing Facilities Program – See Section VII – Budget Flexibility Utilized.
x	“Staff has recommended that APS only provide incentives on individual measures that are cost-effective.”	Before the Non-Residential DSM programs were launched in 2006, all individual measure incentive values were calibrated to ensure they met the Total Resource Cost (“TRC”) test. Going forward, each of the existing prescriptive measures in the program was retested as discussed in Section IX. The same TRC test is provided for new recommended prescriptive measures as discussed in Section XI.F. All custom projects in the program have benefits that exceed costs as measured by the TRC test (TRC greater than 1.0).

In addition to these recommendations, in Decision No. 68648, addressing Residential DSM Programs, the Commission adopted a Staff recommendation requiring that APS provide an update on the Residential HVAC Program commensurate with this 13 Month filing. That requirement is also addressed in this filing.

Exhibit 3 ACC Requirements/APS Response Residential

Section 7c	Staff recommends “...that APS continue to expand the Residential HVAC Efficiency Program throughout APS’ service territory.”	APS provided a Qualified Contractors Training program for Contractors outside the Phoenix metro area -- See Qualified Contractors – Statewide Program.
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VI. Program Status

Exhibit 4 provides a summary of the Non-Residential Program status as of February 28, 2007. The table displays completed projects where incentives have been paid as of February 28, 2007.

Exhibit 4
Non-Residential DSM Electric Savings and Benefits by Program

	Number of Customers	Capacity Savings MW*	Lifetime Savings MWh*	Program Cost	Societal Benefits	Societal Costs	Net Benefits
Existing Facilities Large	29	2.00	189,982	\$1,967,460	\$4,518,324	\$2,680,061	\$1,838,262
Small Business	13	0.14	11,336	\$711,469	\$158,281	\$706,242	(\$547,961)
New Construction	3	0.16	20,315	\$1,248,769	\$501,542	\$1,293,944	(\$792,402)
Building Operator Training	47	0.05	5,201	\$41,051	\$177,505	\$66,219	\$111,286
Energy Information Services	0	0.00	0	\$37,917	\$0	\$37,917	(\$37,917)
Schools	5	0.13	14,686	\$239,092	\$284,239	\$267,200	\$17,039
Total	97	2.48	241,520	\$4,245,758	\$5,639,890	\$5,051,583	\$588,307

* All MW and MWh savings include line losses at 9.8%

Because of these marketing efforts and the response of customers, APS Non-Residential Programs have achieved 2.5 MW of capacity savings which equates to 241,520 lifetime MWh savings. The net benefits to date for these programs are \$588,000. The Company anticipates that it will ultimately achieve the net benefit of \$68 million for all DSM programs as reported in the Portfolio Plan.

Although some of these programs currently show a negative net benefit due to initial start-up costs and low early participation, APS anticipates that these Non-Residential Programs will mature within the next two years and expects future positive net benefits in all programs because the Company is only implementing pre-approved cost effective measures.

Overall Non-Residential Program Status

APS created the APS "Solutions for Business" name to market and promote the Existing Facilities, New Construction, Small Business, Schools, and Energy Information Services Programs. A marketing plan for the Solutions for Business Programs was developed and filed with the ACC Staff on May 25, 2006. The purpose of the marketing plan is to maximize program cost effectiveness and customer acceptance. The overall concept of this plan involves utilizing multiple channels to market, including working with APS key account representatives and within existing equipment delivery markets whenever possible. By working within these existing markets, the Company leverages natural opportunities to promote efficiency at the time that customers are making energy-related purchasing decisions. This involves working closely with key market players and contractors involved in new construction, renovations, and equipment replacement and repair opportunities.

Solutions for Business Program activities included the development of collateral materials, enhancement of website information and functionality, creation of applications and forms, and development of a project tracking and data management system.

Collateral materials developed for this program include:

- Trade ally applications and the Policies and Procedures manual that are posted to the APS Solutions for Business website.
- On-line Prescriptive and New Construction applications that include automatic incentive calculations and data checks.
- Study Report templates and "Sample" applications to use as training tools.

- “Frequently Asked Questions” document, which was posted to the website.
- Two sided program flyer.
- Program tri-fold brochure.

Marketing efforts to promote participation in the program included:

- Creating trade ally awareness through training and recruitment.
- Leveraging existing key account relationships through training and one-on-one meetings to create program awareness and participation.
- Participation in key trade shows, events and public relations outreach.
- Outreach to key trade associations.

Existing Facilities Program Status and Participation

The Existing Facilities Program transitioned from the start-up phase to the implementation phase during this reporting period. The Existing Facilities Program has generated considerable customer interest and activity thus far. A total of 244 active applications for incentives have been received, from 82 unique customers, and 29 of those customers have received incentives. Large school district applications comprise 35 of the 244 applications. As of February 28, 2007, \$850,093 in incentives were paid in the Existing Facilities Program, and this represents approximately 17% of the total incentive budget available for the Existing Facilities Program after utilizing the flexibility available to shift 25% of the Small Business and New Construction budgets to this program. These incentive payouts represent over 1,995 kW of demand savings and 189,982 lifetime MWh savings.

While no customers reached their incentive cap in 2006, in the first two months of 2007, five customers have submitted applications that bring their requested incentives close to or over the \$300,000 cap. The following table lists these customers and their application information.

Exhibit 5
Applications Approaching Incentive Caps

Customer	Application Types	Number of Applications	Total Requested Incentive Amount
Home Improvement Store	Existing Facilities - Custom Retrofit	4	\$295,408
Beverage Company	Existing Facilities - Prescriptive and Custom Retrofit	3	\$427,019
Metro Healthcare	Existing Facilities - Prescriptive Retrofit (11), New Construction Prescriptive (1)	12	\$309,928
Metro Unified School District	Schools/Existing Facilities - Prescriptive Retrofit	9	\$309,056
Food Processor	Existing Facilities - Prescriptive and Custom Retrofit	5	\$327,709

Large New Construction Program Status and Participation

The New Construction Program transitioned from the start-up phase to the implementation phase in this reporting period. In general, long lead times for new construction typically result in a

longer ramp up time for program participation. As a result, the participation in the New Construction Program has been modest, as compared to the Existing Facilities Program. A total of 31 applications for New Construction incentives were received from 18 different customers. Three customers have received incentives. Eight of the 31 applications are from school districts. As of February 28, 2007, \$62,480 in incentives were paid, and this represents approximately 2.2% of the total incentive budget for New Construction Program, and also represents demand savings of approximately 163 kW and 20,315 lifetime MWh savings.

Large New Construction Program activities included the development of collateral materials, enhancement of website information and functionality, creation of applications and forms, and development of a project tracking and data management system.

Marketing efforts to promote participation in the program included developing trade ally relationships with architecture and engineering firms, direct outreach to customers and building owners, and participation in key construction-oriented organizations and events.

Small Business Program Status and Participation

The Small Business Program transitioned from the start-up phase towards implementation phase in this reporting period. A total of 49 applications for Small Business incentives were received from 24 unique customers. One of the 49 applications is from a school district. As of February 28, 2007, thirteen customers received a total of \$51,552 in incentives. This represents approximately 3.1% of the total incentive budget for the Small Business Program, and also represents demand savings of 144 kW and 11,336 lifetime MWh savings.

Small Business Program activities included the development of collateral materials, enhancement of website information and functionality, creation of applications and forms, and development of a project tracking and data management system.

APS continues to specifically solicit participation from small businesses; these customers are frequently difficult to reach through traditional approaches to promoting energy efficiency programs. The Small Business Program was promoted to trade allies, which includes contractors for lighting and HVAC equipment installation that often service the small business market segment. While some progress was made, small business participation remains low. This marketing channel will continue to be worked aggressively; but, without program changes, reaching this market will be difficult and expensive. The low participation translated to a cost/kWh that was over five times the cost of the Existing Facilities Program. Small Business Program changes are being requested to achieve higher penetration levels in this market segment. These proposed changes to the Small Business Program are discussed below in Section XI.D.

Small Business marketing activities to date include:

- **Trade ally awareness, training and recruitment:** Trade allies such as HVAC and lighting contractors are an essential part of any DSM program because they have the opportunity to provide advice to their customers and influence choices in the pivotal "buying stage" for projects. This group is especially useful in reaching small business. Once experienced with the program, trade allies also have the ability to fill out program applications and provide supporting documentation as an added value to their customers.

- **Customer awareness and project generation:** The first step of marketing the program is creating awareness among customers. This has been particularly challenging in the case of small businesses. They need to first be educated on the benefits on energy efficiency before they are interested in learning about the Solutions for Business Program. Efforts to achieve this include:
 - Meetings with APS Economic/Community Development department and the APS Academy for the Advancement of Small, Minority and Women-owned Enterprises (AAAME) Departments to promote the program.
 - Leveraging existing APS relationships among Chamber of Commerce, downtown community redevelopment groups, cities and other organizations which reach small businesses on a regular basis.
 - Leveraging the permitting and economic development infrastructure of cities and towns as a distribution point for information and materials. As an example, the City of Avondale has already agreed to stock Solutions for Business brochures in their business permitting office.
- **Generate program awareness through key trade shows, events and public relations:** APS has participated in the following venues to promote the Small Business Program:
 - *Prestamos Seminario* – This Hispanic small business tradeshow was an outreach to minority businesses. The Solutions for Business Program had a booth at this event with multiple staff members available to address questions and provide program information.
 - *East Valley Chamber of Commerce Business Expo* – Program staff attended this event and provided program information to potential clients.
 - *Phoenix Chamber of Commerce Business Expo* – The APS Solutions for Business Program had a booth at this event with staff members available to address questions and provide program information.
 - *Governor's Council on Small Business* – Solutions for Business Program was allowed to give a short presentation and distribute program flyer. This resulted in an invitation in rural Arizona for a radio program that focuses on small businesses.
 - *Written Publications* – Articles were written for Chamber of Commerce newsletters, the October issue of APS' Success Newsletter to business customers, and articles appeared in both The Electric Times and HVACR Today.
- **Engage key organizations:** Trade associations provide targeted networking opportunities to customers or trade allies who may be predisposed to getting involved with the program. Key organizations engaged by the Solutions for Business Program include:
 - Building Owners and Managers Association ("BOMA"), and the National Association of Industrial and Office Parks have been targeted because many small businesses are located within multi-tenant buildings.
 - Green Building Council, Arizona Association of Economic Developers, Arizona Energy Engineers, the Air Conditioning Contractors of Arizona, the Arizona Association of Economic Developers and Valley Forward all have members or extensive contact with small businesses.
 - Arizona Department of Environmental Quality Prevention Pollution program and their Arizona Green Business/Green Schools programs and training programs with the Electric League of Arizona are being investigated to develop partnerships.

Schools Program Status and Participation

A total of 13 applications from schools have been paid, from 5 unique school districts, representing 10 schools. When an incentive application is received from a school district and deemed eligible, funding is first allocated from the Schools Program budget, subject to the \$25,000 per school district or \$15/student cap. Any additional funding required to cover the application is then allocated from the appropriate Existing Facilities, New Construction, or Small Business Programs budgets. The self-reported size of all school entities that submitted applications, as well as incentives that have already been paid to five of those school districts, are provided in the following table:

**Exhibit 6
Schools' Incentives**

School Location	Project Type (s)	No. of Students in District	Incentives Paid Schools Program	Incentives Paid All other Programs	Total Incentives Paid
Non-Metro School District	Prescriptive Measures – Retrofit Study	1400	\$3,868	-	\$3,869
Metro School District	Prescriptive Measures – Retrofit	28,000	\$19,512	-	\$19,512
Metro Elementary Schools	Prescriptive & Custom Measures – Retrofit	1,250	-	-	-
Non-Metro School District	Prescriptive Measures – Retrofit	186	\$2,790	\$496	\$3,286
Metro School	Prescriptive Measures – Retrofit	420	-	-	-
Metro School District	Prescriptive & Custom Measures – Retrofit	35,743	\$25,000	\$106,598	\$131,598
Non-Metro Elementary School District	Custom and Prescriptive Measures – Retrofit	7,240	-	-	-
Metro Unified School District	Prescriptive & Custom Measures – New Construction	18,000	-	-	-
Metro School District	Prescriptive & Custom Measures – Retrofit	34,226	\$25,000	\$82,856	\$107,857
Metro School District	Prescriptive Measures – Retrofit	37,539	-	-	-
Metro Elementary School	Prescriptive & Custom Measures – Retrofit	1,250	-	-	-
Non-Metro High School	Prescriptive Measures – Retrofit	1,245	-	-	-
Non-Metro High School District	Prescriptive Measures – Retrofit	110,500	-	-	-

As of February 28, 2007, \$266,617 of incentives for schools projects was paid, and funded by the Schools Program as shown below. The portion of those projects under the schools cap was \$76,666 or 6.9% of the program budget for schools.

Exhibit 7
Schools' Incentive Status

Incentive Status by Fund for Active Applications	Incentives Paid
Schools Budget – Prescriptive & Custom	\$76,666
Schools Budget – Feasibility, Commissioning and Retro-commissioning Studies	\$0
Total School Funds	\$76,666
Schools – School Funds	\$76,666
Schools – Existing Facilities Funds	\$189,455
Schools – New Construction Funds	\$0
Schools – Small Business Funds	\$496
Total Allocated for Schools	\$266,617

The following table reflects the total demand (kW) and energy (kWh) saving achievements through February 28, 2007 for schools projects that received incentives.

Exhibit 8
Schools' Demand & Energy Savings

Schools Funding by Program	kW Savings	Annual MWh Savings	Lifetime MWh Savings
Schools – School Funds	131.3	813	14,686
Schools – Existing Facilities Funds	511.9	2,354	38,023
Schools – New Construction Funds	0	0	0
Schools – Small Business Funds	.4	20	227
Total Attributable to Schools	643.6	3,187	52,936

* All kW and MWh savings include line losses at 9.8%

School District awareness and project generation: Direct marketing to school districts included one-on-one meetings with both rural and metro school districts. School Districts have demonstrated a healthy level of program participation since the program was started. The two highest incentive checks were paid to two different school districts. Each of these checks was greater than \$100,000. Two rural and three metro school districts received incentive payments.

In addition to individual school district outreach, program staff held multiple meetings with the Arizona School Facilities Board ("SFB"). The program was presented to SFB staff members, and followed up with meetings. Further training and assistance was provided to SFB staff members in incorporating the Solutions for Business Program in their new construction and renovation plans for Arizona schools. The SFB has since increased their requirements for new schools. They must now meet the ASHRAE 90.1-2004 Energy Standard for new construction.

The architect/engineering team must provide a report saying that they have met the requirements. The SFB has also decided that they will require SEER 13 package units and will pay for SEER 14 if incentives are available. They will also pay for premium T8 fluorescent lighting and many of their recommendations mirror the APS Incentive program.

Program announcements were targeted toward the following organizations:

- All charter schools in May, and again in September 2006. In addition, the Energy Office staff presented the APS program at the "call to the public" at the November 2006 monthly meeting of the State Board for Charter Schools
- The Arizona Association of School Business Officials, the Arizona School Administrator's Association, the Arizona Department of Education and the Greater Phoenix Purchasing Consortium of Schools
- All of the County School Superintendent's Offices that have school districts served by APS (10 counties)

Special meetings were held with key trade allies for the schools market, and included lighting and other energy efficient equipment representatives.

Building Operator Training ("BOT") Program Status and Activities

The BOT Program had nine APS customer participants in the Spring 2006 BOT session and twelve APS customer participants in the Fall 2006 BOT session. All twenty-one successfully received a passing grade from the Electric League of Arizona ("ELA") and received their BOT Certificate of Completion. The training subsidy paid to the ELA to cover the tuition subsidy for APS customer participation totaled \$12,547.50 or \$597.50 per APS customer.

The BOT Program also had twenty-six APS customer participants that received a passing grade for the ELA in the Fall 2006 Facilities Maintenance Training ("FMT") session. The FMT subsidy paid to the ELA to cover the tuition subsidy for APS customers was \$11,635 or \$447.50 per passing customer, and was paid after verification that the participant completed all required coursework, as required by Decision No. 68488. BOT Program savings include the following:

**Exhibit 9
BOT Energy and Demand Savings**

Participants	Lifetime MWh Savings	kW Demand Savings *
BOT = 21	2,324	20.0
FMT = 26	2,877	24.8
Total	5,201	44.8

** All kW and MWh savings include line losses at 9.8%*

EIS Program Status and Activities

Automated Energy was selected as the implementation contractor for the EIS Program through a competitive RFP process in the last quarter of 2006. Automated Energy will provide turn-key implementation services for the program. The program was launched on November 16, 2006 and discussions have occurred with numerous customers that are considering participating in the program.

Costs incurred for the EIS Program were \$583 for consumer education expenses, \$12,813 for program administration expenses, and \$24,521 for program implementation expenses.

Technical Studies Status and Activities

As part of these DSM programs, there was one study representing \$2,325 of study incentives paid. To date, APS is not aware of any projects or submitted applications that have been completed as a result of this study.

Qualified Contractors – Statewide Program

APS is working to expand the reach of the APS Qualified Contractor program outside the Phoenix metropolitan area as directed by Decision No. 68648. APS has been working with the ELA to implement the training and market the program to contractors outside of the metro area, including a direct mail campaign and advertising in the HVACR Today trade newspaper. On March 1-2, 2007, APS held the first two-day intensive training seminar with follow-up qualification exams to allow contractors from outside the metro area to conveniently achieve the training required to participate in the Qualified Contractor Program.

The result of this training effort was a success. Fourteen contractors attended the training seminar and successfully passed the qualification exams to earn status as an APS Qualified Contractor. In addition to meeting the training requirements, these contractors were also screened for other professional requirements, such as good standing with the Arizona Registrar of Contractors and the Better Business Bureau, the standard for an APS Qualified Contractor. Course attendees for the statewide APS Qualified Contractor HVAC course included the following cities/towns:

- Yuma (3 firms)
- Payson (1 firm)
- Wickenburg (1 firm)
- Flagstaff (1 firm)
- Douglas (1 firm)
- Casa Grande (2 firms)
- Snowflake (1 firm)
- Congress (1 firm, 2 employees)
- Prescott Valley (1 firm)

VII. Budget

This Section summarizes the Non-Residential Program budget and spending activities. Exhibit 10 shows the list of Non-Residential Programs and their associated budgets from the Portfolio Plan. Exhibit 11 shows the Non-Residential Program spending from March 1, 2006 through February 28, 2007. Exhibit 12 shows the remaining 2007 budget (March 1, 2007 through December 31, 2007), which includes the balance of carry-over that was not spent in the original 2005 and 2006 budget amounts.

Exhibit 10
2005-2007 DSM Non-Residential Program Budget
July 2005 Portfolio Plan – As Originally Filed

Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Schools	1,113,000	183,000	25,000	125,000	25,000	209,000	1,680,000
Small Business	2,207,175	152,596	87,196	1,079,972	396,928	435,984	4,359,851
Existing Facilities	3,422,287	236,603	135,203	1,674,527	615,448	676,007	6,760,075
Large New Construction	3,726,037	257,603	147,202	1,823,152	670,074	736,007	7,360,075
Bldg Operator Training	0	192,000	6,000	21,000	9,000	12,000	240,000
Energy Information Srvc	240,000	10,500	6,000	24,000	7,500	12,000	300,000
Totals for Non-Residential	\$10,708,499	\$1,032,302	\$406,601	\$4,747,651	\$1,723,950	\$2,080,998	\$ 20,700,001

Exhibit 11
DSM Non-Residential Program Expenditures
March 1, 2006 -- February 28, 2007

Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Schools	76,666	0	241	141,877	475	19,832	239,092
Small Business	51,552	390	1,590	589,091	7,932	60,913	711,469
Existing Facilities	850,093	2,641	4,691	977,812	8,903	123,320	1,967,460
Large New Construction	62,480	4,312	2,117	1,053,422	8,765	117,673	1,248,769
Bldg Operator Training	0	24,183	0	10,931	4,360	1,578	41,051
Energy Information Srvc	0	0	583	24,521	0	12,813	37,917
Totals for Non-Residential	\$1,040,792	\$31,526	\$9,223	\$2,797,653	\$30,435	\$336,129	\$ 4,245,758

Note: Non-Residential spending from Jan. 1, 2005 – Feb. 28, 2006 was \$425,473 for Planning & Administration activities during the program planning and development stage.

For the 12 months ending February 28 2007, the non-residential rebates and incentives paid, divided by the total non-residential spending, was 24.5%, which is less than the 52% cap on incentives that was approved in Decision No. 68488.

Exhibit 12
Remaining 2007 DSM Non-Residential Program Budget

Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Schools	1,036,334	183,000	24,759	(16,877)	24,525	142,914	1,394,655
Small Business	1,616,717	114,154	64,205	368,161	291,747	222,621	2,677,604
Existing Facilities	4,026,989	335,336	188,184	1,044,868	869,121	604,356	7,035,854
Large New Construction	2,747,668	189,968	108,813	577,298	495,982	352,291	4,472,020
Bldg Operator Training	0	167,818	6,000	10,069	4,640	4,598	193,125
Energy Information Srvce	240,000	10,500	5,417	(521)	7,500	(7,385)	255,511
Totals for Non-Residential	\$9,667,707	\$1,000,776	\$397,378	\$1,949,998	\$1,693,515	\$1,319,395	\$ 16,028,769

This plan reflects the start-up nature of this DSM endeavor, and the funding needed to adequately plan, develop and deliver quality programs. It typically takes two years or more to ramp-up programs and achieve significant customer participation levels and program savings. Future budgets will maximize the amount of program funds that go directly to customers through rebates and incentives, training and technical assistance, and consumer education.

Additional Budget Detail

Budget Flexibility Utilized

In Decision No. 68488, the Commission authorized APS to shift a maximum of 25% of budgeted funds from one program to another program in the same sector per calendar year. APS utilized the budget flexibility to meet customer demand in the Existing Facilities Program. Therefore, on January 1, 2007, the Company reallocated 25% of each of the Small Business Program and Large New Construction Program funds to the Existing Facilities Program to meet the expected customer demand for the 2007 budget year. As of February 28, 2007, over 40% of the Existing Facilities Program incentive budget was either paid to customers or reserved for customers with pre-approved applications. Even more significant, when the remaining Existing Facilities Program applications are included, it totals over 80% of the incentive dollars available, for the entire 3-year adjusted Existing Facilities Program incentive budget.

This reallocation of funds from the Small Business Program is justified as customer response and customer participation by this segment has been slow (*see* Exhibit 4), despite strong efforts to reach this market. As explained Section XI.D of this report, modifications to the Small Business Program are needed to motivate this segment of customers to undertake energy-efficiency projects and to overcome barriers to entry.

Large New Construction Program participation levels have been low to date (*see* Exhibit 4). The budget reallocation of Large New Construction Program dollars to the Existing Facilities Program is justified since most large construction projects have a long lead time (2 to 3 years)

for completion. Therefore, many projects currently under construction will likely not apply for incentives during the 2007 budget year.

APS will likely need to resolve this budget issue in the Existing Facilities Program in the near future. The Company has identified potential solutions to the Existing Facilities Program, which include, but are not limited to, the following:

- A waiting list could be created for applications submitted, and prioritized by order submitted. The prioritization could be based on the first project to be completed, or based on the size of the project, or other parameters. However, APS is concerned that customer satisfaction may be an issue and that opportunities for customers to install energy efficiency measures would be lost if incentive funding in the Existing Facilities Program is restricted or cut-off. Other possible ramifications of utilizing a waiting list and limiting incentive dollars for the Existing Facilities Program include:
 - Any stop-and-start activity in a program reduces the momentum and interest by customers and trade allies. This is counter-productive to the marketing and promotion targeting customers and trade allies in an effort to engage them in the program, and will likely further reduce their participation levels because they will view APS' DSM Programs as an unreliable or interim source in support of their energy-efficiency efforts.
 - The result of stop-and-go funding could also result in lower contractor participation as they may see the program as seasonal or limited in funding and not a reliable source to build or enhance their business around. They will be less engaged in the program and seek alternative means of enhancing their business, given limited resources.
- APS does not wish to interrupt the current participation by customers and trade allies, and requests ACC approval for increased funding for the Existing Facilities Program. This should be accomplished by allowing for more program incentive spending in the Existing Facilities Program by removing the ceiling on incentive spending. The early participation and positive net benefit in this program justifies the need for more incentive budget availability to meet the demands in the Existing Facilities Program. Therefore, APS is proposing that all Existing Facilities Program applications received for approved DSM measures would be paid an incentive, with no annual cap on spending for this program. KEMA, APS' implementation contractor, is estimating that the program could hit the incentive cap for available funds on or before June 1, 2007, based on recent application activity in the Existing Facilities Program. This request is being included in this 13 Month Filing, and timing is of the essence so customers will not be turned away, because timing could be an issue if an ACC decision in this procedure is not received by June 1, 2007.

As seen in Section XI.E, APS is proposing to increase the EIS incentive cap to \$12,000 per customer per year to cover EIS set up costs. As such, the Company may eventually need to increase the overall program budget, but it is too early to tell given our November 2006 implementation date for this program.

Planning & Administration Cost

During the review of the Non-Residential Programs, ACC Staff was interested in seeing a more detailed break-down of the program administration and implementation sections of the budget.

As seen in Exhibit 11, APS has successfully kept the actual Non-Residential Program spending for planning and administration costs below 10% of total non-residential spending, and more specifically, below \$1 million, during the initial 12 month period, as required in Decision No. 68488.

Exhibit 13
Planning and Administration ("P&A") Details
March 1, 2006 – February 28, 2007

Salary Allocation:	Total	Existing Facilities	New Construction	Small Business	Schools	BOT	EIS
ACC Reporting/ Data Requests	\$12,653	\$3,723	\$5,320	\$1,953	\$1,405	\$166	\$86
Back Office Support	\$3,133	\$1,385	\$1,172	\$325	\$165	\$0	\$86
Oversight of Baseline Contractor	\$4,069	\$1,905	\$2,164	\$0	\$0	\$0	\$0
Oversight of Implementation	\$3,516	\$1,385	\$0	\$1,302	\$0	\$665	\$174
Oversight of Implementation Contractor	\$26,827	\$8,659	\$7,394	\$4,475	\$1,818	\$332	\$4,149
Oversight of Program Management	\$91,862	\$35,934	\$37,782	\$18,146	\$0	\$0	\$0
Program Development & Planning	\$78,038	\$28,833	\$22,723	\$13,996	\$7,768	\$0	\$4,668
Program Management / Coordination	\$100,688	\$32,860	\$36,475	\$18,796	\$8,511	\$415	\$3,631
Program Promotion	\$8,179	\$5,109	\$2,254	\$651	\$165	\$0	\$0
Salary Sub-Total	\$328,925	\$119,793	\$115,284	\$59,644	\$19,832	\$1,578	\$12,794
Other P&A Expenses:							
Employee Expenses	\$31	\$11	\$0	\$0	\$0	\$0	\$20
Contractor Expenses	\$4,830	\$1,631	\$1,930	\$1,269	\$0	\$0	\$0
Other Expenses	\$2,312	\$1,853	\$459	\$0	\$0	\$0	\$0
Overhead	\$31	\$31	\$0	\$0	\$0	\$0	\$0
Other P&A Sub-Total	\$7,204	\$3,526	\$2,389	\$1,269	\$0	\$0	\$20
Total P&A Expenses	\$336,129	\$123,319	\$117,673	\$60,913	\$19,832	\$1,578	\$12,814

Implementation Cost

Detailed implementation spending by function (primarily labor costs) for the period of March 2006 through February 2007 was as follows:

Exhibit 14
Detail of Non-Residential Implementation Costs (Mar. 1, 2006 – Feb. 28, 2007)

DSM Program	Implementation Labor	Marketing Labor	Education Labor	Technical Services Labor	Travel and Office Expenses	Total Cost
Existing Facilities	\$412,229	\$285,808	\$74,795	\$152,480	\$52,500	\$977,812

DSM Program	Implementation Labor	Marketing Labor	Education Labor	Technical Services Labor	Travel and Office Expenses	Total Cost
Large New Construction	\$453,094	\$277,412	\$81,675	\$194,990	\$46,250	\$1,053,422
Small Business	\$270,354	\$182,591	\$46,073	\$47,323	\$42,750	\$589,091
Schools	\$55,247	\$50,480	\$9,952	\$22,253	\$3,946	\$141,877
BOT	\$10,931	\$0	\$0	\$0	\$0	\$10,931
EIS	\$23,450	\$0	\$0	\$0	\$1,071	\$24,521
Total Non-Res	\$1,225,305	\$796,291	\$212,495	\$417,046	\$146,517	\$2,797,654

VIII. Non-Residential Portfolio Modifications & Clarifications

APS is proposing the following program modifications and clarifications:

- Existing Facilities Program Budget Ceiling;
- Marketing material submission;
- Administration budget restrictions;
- Customer incentive budget restrictions;
- Owner/tenant customer/participant definition.

Existing Facilities Program Budget Ceiling

APS has provided the most recent budget information, including the utilization of the 25% budget shift previously approved in Decision No 68488. However, it is anticipated that additional budget changes will be needed for the Existing Facilities Program in order to maximize program effectiveness, react to market conditions and customer responses, and limit administrative burden.

APS is proposing that all Existing Facilities Program applications received for approved DSM measures be paid an incentive, with no annual budget ceiling on spending for this program. KEMA is estimating that the program could hit the incentive cap for available funds on or before June 1, 2007, based on recent application activity in the Existing Facilities Program. This request is being included in this 13 Month Filing, but timing could be an issue if an ACC decision in this procedure is not anticipated by June 1, 2007.

Marketing Material Submission

APS was directed to submit "all marketing materials for Staff review within 30 days of the development of each piece" in Decision No. 68488.

APS has met this filing requirement during the first 12 months of implementation, and is now seeking to change this requirement with final program approval. Through these monthly filings, APS believes that ACC Staff now has been provided materials to develop an understanding of the Company's Non-Residential Program marketing materials look and feel, as the programs

were initially being developed. Now that the programs and the approach for customer contact has been established, the Company is requesting that a sample of marketing materials be provided to the Commission as part of the Company's Semi-Annual DSM Reports, similar to Commission requests for other DSM programs.

Administration Budget Restrictions

In Decision No. 68488, the Commission specified that the budget for planning and administration could not exceed 10% of the total program budget, but limited the amount of recovery during the initial 12 month period to a maximum of \$1 million. During the review of the Non-Residential Programs, ACC Staff was interested in seeing a more detailed break-down of the program administration and implementation sections of the budget. As demonstrated in Exhibit 11, APS has successfully kept the actual Non-Residential Program spending for planning and administration costs below 10% of the total Non-Residential Programs spending and, more specifically, below \$1 million, as required in Decision No. 68488. Since this requirement was originally set due to the initial lack of specificity in the Portfolio Plan as it pertained to the Non-Residential Programs, APS now requests that the Commission waive this administration budget restriction requirement (\$1 million cap) because APS has demonstrated it can control administration costs. This would leave the maximum of 10% total program budget in place, consistent with other DSM programs. (See Decision No. 68648 – Residential DSM Programs).

Restrictions on Customer Incentives

Along with our request for final approval of these programs, the Company is also requesting that the 52% restriction (Decision No 68488, paragraph 6v) on incentives be removed. The justification for lifting the restriction is:

- Measures approved in our Non-Residential Programs are all cost effective as measured by the TRC test;
- Programs are through the initial start-up phase; and
- Providing as much of the funding as possible to customers (move DSM dollars into customer's hands) further facilitates the overall goals of energy efficiency.

As these programs continue to mature, customer demand will increase and, thus, more incentive dollars will be needed to meet customer obligations. Ideally, when the programs are mature, APS would like to be paying 65% to 70% of its Non-Residential Programs budget in incentives to customers that install cost effective energy efficiency projects. This ratio is similar to other mature DSM programs in other jurisdictions, and as indicated on page 25 of APS' Market Potential Study, "it may be reasonable to expect that a particular program will have non-incentive costs of 50% (or higher) during its initial development and early years of implementation, but that as development costs decline and economies scale are obtained, the non-incentive share may fall significantly". It is estimated that the Non-Residential Programs will mature to this level after two to three full-years of implementation.

Owner/Tenant Customer/Participant Definition

There are situations where property owners that install energy efficient equipment on their properties would not qualify for APS DSM incentives due to a gap in the program description. For example, multi-family facility owners often own and are responsible for the major equipment that serves their apartment buildings. Many of these apartments are on residential meters and rates. Because of this, the tenant is considered the APS customer. The owners of these buildings

are responsible for the purchase and replacement of HVAC equipment and other major energy consuming equipment related to the apartments, yet at this time, the building owners do not qualify to receive energy efficiency incentives from either the Residential or Solutions for Business Programs. As the DSM programs are currently designed, should a building owner choose to install an energy efficient piece of equipment for their buildings with APS electric accounts listed under the tenants names, the building owner would not qualify for any energy efficiency incentives.

Installing energy efficiency equipment is clearly the behavior that the APS DSM programs are attempting to encourage. As a solution to this situation, the Company is proposing that if owners of buildings with APS meters under a different name (e.g. tenant) choose equipment or systems that otherwise qualify for the Solutions for Business Programs, these building owners would qualify for the incentives under those programs. In these situations, APS and its non-residential implementation contractor will ensure that no additional incentives be paid to the APS customer (tenant) for the same energy efficient measure installation.

IX. Prescriptive Measures Update and Revisions

A comprehensive review and update of all of the prescriptive measures currently included in each of the Non-Residential Programs has been completed. This analysis included a review and update of the technical data and performance factors and an update of the savings, customer cost and cost-effectiveness of each of APS' existing schedule of non-residential energy efficiency measures. The review also included a detailed analysis of a new schedule of measures to be included in the program, as well as an analysis of a subset of measures to be included in the proposed Small Business Program (both to be discussed in later sections).

The prescriptive measure review and update process required the revision of the technical and cost performance variables for each specific measure, as well as other global technical and financial variables that influence the cost effectiveness of each measure. A range of data sources was used in the analysis including:

- Data from the APS Baseline and Market Potential Studies;
- Specifications from various industry recognized standards including the American Society of Heating, Refrigerating, and Air-Conditioning Engineers ("ASHRAE"), and the Consortium for Energy Efficiency ("CEE");
- Data from various industry recognized sources, such as the Database for Energy Efficiency Resources ("DEER"), and Energy Star;
- Original research from sources such as manufacturers, vendors, suppliers, contractors, and other industry professionals;
- Original energy analysis by the MER contractor, including engineering analysis and hourly building energy simulation modeling;
- Experience drawn from the first year of program implementation; and
- Input from DSM Collaborative Working Group members.

The process and results of the review for each of these categories of data is described in the following sections.

The TRC test was used to justify each of the measures. This test differs from the societal test in two ways.

- The TRC test uses the Company's cost of capital as the discount factor for future benefit streams. The Societal Cost test uses a societal discount rate.
- The TRC does not monetize externalities (i.e. reduced emissions and water savings), whereas the Societal Cost test does factor in these externalities.

Given these factors, the TRC test is a more conservative test, as compared to the Societal Cost test. The Company found that all proposed and existing DSM measures passed the TRC test.

Changes to Global Variables

This section discusses changes to key global variables that were used in the analysis of each measure including:

- Customer rate data;
- APS avoided costs;
- Ratio of non-incentive to incentive costs;
- Discount rate used in the present value analysis; and
- Line loss and capacity reserve margin factors.

Customer Rate Data

The rate data used in the analysis is the price that end use customers pay for energy, and is used to determine the customer payback on energy efficiency projects. Payback periods are used to help set incentive levels that make energy efficiency upgrades attractive to program participants. The energy and demand charges used in the updated analysis were based on the Company's current E-32 General Service rate.

Avoided Costs

Avoided costs used in the update of measure cost effectiveness were revised to reflect current APS resource planning assumptions. The values used in the update are levelized costs for a 20 year planning horizon and are based on the following assumptions:

- Year 2007 and 2008 are based on short term capacity costs.
- Avoided capacity costs are levelized values (\$/kW/year) based upon the fall 2006 APS forecast of avoided capacity cost.
- Avoided energy costs are levelized values (\$/kWh per year) based upon the fall 2006 APS forecast of avoided energy cost.
- The base case was APS 2007 budget assumptions with SO₂ emissions costs.
- The avoided energy costs forecast includes an assumed forward market price for natural gas (\$/MMBTU Delivered) as of 9/29/2006.

Ratio of Non-incentive to Incentive Costs

The ratio of non-incentive to incentive costs is used to estimate the cost of program administration in the cost-effectiveness analysis of each measure. During the first year of program operations, this ratio was nearly 1:1 or 97.5%, indicating that for every program dollar spent on direct customer incentives, approximately one dollar was spent on program operation and administration. The revised analysis for all measures uses an updated ratio that assumes that the programs are emerging from start-up phase and thus the overall administration costs of the

program are expected to drop as a percentage of overall program costs as the programs reach maturity. This is consistent with the experience of other DSM programs around the country. The ratio of non-incentive to incentive costs used for the revised analysis for all existing residential and non-residential measures was 35:65 or 54%. This may be revisited at the end of the 2007 program year to determine whether further adjustments are warranted.

The ratio of non-incentive to incentive costs for the proposed Small Business Program (as discussed in section XI.D) is initially set at 30:70 or 42.9%, reflecting an assumption that higher incentive levels (the strategy to deliver this program as an upstream market actors program through contractors), and the use of web enabled applications will reduce marketing and administration costs while achieving a high level of market penetration. Exhibit 15 summarizes the non-incentive to incentive cost ratios used in the analysis.

Exhibit 15
Ratio of Non-incentive to Incentive Costs

Program Type	Incentives	Administration	Ratio
Planning Assumptions	50.63%	49.37%	97.5%
Revised Assumptions	65%	35%	53.8%
Proposed small business (< 100 kW)	70%	30%	42.9%

Discount Rate

A discount rate is used in the cost-effectiveness analysis of each measure to calculate the net present value of benefits and costs. The original analysis assumed a discount rate of 7.09%. The revised analysis used a discount rate of 8.42%. The 8.42% discount rate is consistent with APS' proposed cost of equity and equity ratio from its current rate case.¹ It includes the incremental cost of debt forecasted for future years and the income tax benefit of interest on incremental debt issued. This cost of capital is used to analyze capital projects and to compare the cost of competing energy resources such as DSM. This discount rate is a nominal rate that includes inflation.

Line Loss Factor and Capacity Reserve Factor

The updated measure analysis worksheets included a line loss and capacity reserve factor of 9.8% and 15%, respectively. These factors were not included in the original measure analysis worksheets planning analysis completed for the Portfolio Plan filed, but the line loss factor was added upon request of Staff. The net impact of the addition of these factors was a 26.3% increase in demand savings and a 9.8% increase in energy savings attributable to each measure at the generator. The addition of these factors also increased the present value of savings by approximately 16%.

Revisions to Existing Energy Efficiency Measures

The assumptions and performance factors of each measure included in the current portfolio of Solutions for Business Programs were subjected to a comprehensive critical review and selective

¹ Docket No. E-01345A-05-0816.

update. This included a review and update of technology configurations and sizes, demand and energy performance factors, operating factors, customer costs, and measure cost-effectiveness.

Lighting Measure Updates

Each of the lighting measures was subjected to a comprehensive and detailed review of technology characteristics, demand and energy performance variables, customer costs and cost-effectiveness. Demand, energy and operational factors were adjusted on selected measures on the basis of additional technical research, a comparison to values included in the Market Potential and Baseline Study, and a comparison to other sources of technology performance data (e.g., manufacturer's data). The expected life of the CFL lamps was adjusted down (five years to two years)² to better reflect a reasonable life expectancy. The incentive to use CFL lamps was changed from \$2.50 to \$5.00 per lamp to reflect the significant savings this measure achieves. The changes are documented on the revised measure analysis worksheets.

HVAC Measure Updates

Each of the HVAC measures was subjected to a comprehensive and detailed review of technology characteristics, demand and energy performance variables, customer costs and cost-effectiveness. In some cases, technology characteristics and minimum performance standards were adjusted to be more in line with recognized standards such as ASHRAE, CEE and Energy Star. Demand, energy and operational factors were adjusted on selected measures on the basis of additional technical research, a comparison to values included in the Market Potential and Baseline Study, and a comparison to other sources of technology performance data (e.g., manufacturer's data). The changes are documented on the revised measure analysis worksheets.

The performance of SEER-rated HVAC equipment $\leq 65,000$ Btuh was subjected to a particularly rigorous scrutiny. Hourly building energy simulation models were built in the Energy10 energy simulation model and a comparison of 14 through 18 SEER at different EER levels was conducted. This analysis, along with a detailed review of air conditioner and heat pump performance data, formed the basis for a revision to the analysis worksheets. The analysis led to a modest increase in demand and energy savings in the analysis worksheets and significantly more favorable cost effectiveness analysis results. These results, along with the findings from a review of tracking and product databases, indicate that the minimum EER requirement can be dropped for units that are 5 tons and less and still have a cost effective program. See the discussion under Residential Program Enhancements for more discussion of this topic.

In addition, the size categories used in the analysis of the air- and water-cooled chiller measures was changed so the categorization of equipment would be consistent with ASHRAE Standard 90.1. Formerly, the analysis was organized by various discrete chiller sizes, whereas the revised analysis examines chillers in the size ranges specified by ASHRAE 90.1. This change allows for more systematic benchmarking of the program design against this important performance standard.

² This reduction is based on an expected useful lamp life (EUL) of 8,000 hours and 4,481 expected annual operating hours for CFLs installed in commercial facilities, or an EUL of roughly 1.8 years. This value has been rounded to 2 years.

Motors and VSD Measure Updates

The updated measure analysis worksheets has revised the definition of efficiency levels for both base and qualifying energy efficient motors to match National Electrical Manufacturers Association ("NEMA") / CEE standards. NEMA and CEE motor efficiency definitions are now consistent for standard and energy efficient motors. Standard motor efficiencies are based on the Energy Policy Act ("EPA") standards. The net impact of this modification in program definitions was to decrease the efficiency levels for both standard and qualifying program motors in the revised measure analysis worksheets.

Refrigeration Measure Updates

Refrigeration measures were subjected to a review of demand and energy performance factors and customer costs. Most of the assumptions used in the original program planning analysis were found to be valid. The only notable exception was high-efficiency evaporator fan motors where motor efficiencies and savings were revised downward to be more consistent with products currently available on the market.

Updates to Measure Costs

The update included a comprehensive review of customer incremental and installed costs for all measures. This included modifications where the original cost assumptions were no longer valid due to a change in technical specification, or where more recent data indicated that the original cost values needed to be revised. A range of data sources were used in the analysis including the Baseline Study, DEER database, compilations of cost data available from Summit Blue, field implementation cost data observations available from KEMA, and original cost research with manufacturers, suppliers, vendors and web resources conducted for this update by Summit Blue. This comprehensive review led to revisions of costs for each measure that are current and robust.

Revised TRC Values

The changes to global variables and the energy performance and cost factors for each measure led to revisions to the cost-effectiveness test results. The effect of changes in the global variables led to a general increase in the benefit/cost ratios of all measures. A summary comparison of the plan and revised values is provided in Exhibit 16.

Exhibit 16
Comparison of Plan to Revised TRC Values
Non-Residential Programs

Measure Description	Plan		Revised	
	TRC	Incentive/ Incremental	TRC	Incentive/ Incremental
LIGHTING MEASURES				
Replace T12 Systems & Magnetic Ballasts w T8 Systems & Elect Ballasts	1.5	40%	2.2	43%
Replace HID Systems with Linear Fluorescent T8 and T5 Systems	3.0	47%	3.2	53%
Energy Efficient Integral Compact Fluorescent Lighting (CFL)	3.7	14%	3.4	20%
Replace Incandescent and CFL Exit Signs	1.5	27%	2.5	34%
Install Occupancy Sensors on Lighting Fixtures	1.7	33%	2.6	32%
Daylighting Controls	2.0	17%	2.5	20%
Delamp	5.7	49%	5.3	39%

Measure Description	Plan		Revised	
	TRC	Incentive/ Incremental	TRC	Incentive/ Incremental
Replace Inefficient Outdoor Lighting w High Efficiency Lighting	7.5	34%	10.7	19%
Measure Description	Plan		Revised	
	TRC	Incentive/ Incremental	TRC	Incentive/ Incremental
HVAC MEASURES				
Install Energy-Efficient Water-Cooled Chillers	2.0	36%	3.5	46%
Install Energy-Efficient Air-Cooled Chillers	4.2	60%	4.6	44%
Air-Cooled Packaged AC -- SEER Rated	1.7	36%	1.3	34%
HVAC Quality Installation (Non-Residential)	1.5	75%	3.8	36%
System Diagnostics and Tune-up (Non-Residential)	1.1	64%	3.4	38%
Programmable Thermostats	5.0	26%	6.6	26%
MOTOR MEASURES				
Open Drip-Proof (ODP) Motors; 1200 - 3600 RPM	2.3	39%	3.8	33%
Totally Enclosed Fan-Cooled (TEFC) Motors; 1200 - 3600 RPM	1.8	21%	2.0	18%
Variable Speed Drives (VSD's)	4.4	25%	4.3	19%
REFRIGERATION MEASURES				
Anti-Sweat Heater Controls	3.0	36%	4.0	34%
High Efficiency Evaporator Fan Motors	4.8	40%	8.0	16%
High Efficiency Reach-in Refrigerators and Freezers	3.6	75%	3.1	41%
High Efficiency Ice Makers	2.0	44%	1.5	12%
Strip Curtains and Night Covers	1.8	30%	2.3	23%
Occupancy Sensor Vending Machine and Reach-in Cooler Controls	1.9	51%	2.4	45%

Each custom project is unique, therefore, a TRC test is performed for each specific custom project. Each custom project must have a TRC greater than 1 to qualify for an incentive. The maximum custom incentive is 50% of the incremental cost of the custom measure.

X. Residential Program Enhancements

A. HVAC Program Enhancements – SEER/EER Changes

Currently, the Residential HVAC Program requires that residential air conditioning systems less than 65,000 Btuh qualifying for rebates in the program meet both SEER and EER performance criteria. The program incentives and qualifying performance criteria are shown in Exhibit 17.

Exhibit 17
Incentives and Minimum Efficiency Levels for Unitary
AC/HP Units ≤ 65,000 Btuh

Minimum Efficiency Levels		APS Rebate Amount
SEER	EER	
14	12	\$250
16	14	\$400

Most customers are aware of SEER values as an energy efficiency indicator for HVAC units, however, customers and many of their contractors are unfamiliar with EER. The concept that for any single SEER rating, different units can have different EER ratings, has been difficult for the market to comprehend. Furthermore, EER values for HVAC units have been difficult to find and only a small number of HVAC units qualified for incentives. During the first year of this program, the uncertainty generated from lack of information and knowledge of EER values created hurdles to streamlined participation by customers and their contractors and opportunities to encourage customers to install more efficient units was lost.

A detailed analysis of the demand and energy savings, incremental cost and cost-effectiveness of SEER-rated air conditioning equipment less than or equal to 65,000 Btuh was conducted to determine whether streamlining the program would be cost-effective. The analysis included an assessment of the importance of including both SEER and EER in savings analyses and as qualifying criteria for the program; a review of program tracking database to assess the reliability of contractor reported performance factors; a review of the California Energy Commission ("CEC") and CEE databases of air conditioning equipment; and a detailed review and analysis of the savings, cost and cost-effectiveness of this class of equipment to identify potential areas for adjusting both the qualifying criteria and incentive levels. The savings analysis included detailed hourly building energy simulation modeling, and the cost-effectiveness analysis used the revised global variables for avoided cost and discount rate described above.

The analysis revealed the following findings:

- The revised analysis using global, savings performance and cost variables resulted in significantly more favorable cost effectiveness analysis results for this measure. The more favorable cost effectiveness values and an analysis of product performance in various product databases indicates that the minimum EER requirement can be dropped and still have a cost effective program.
- Both the EER and SEER ratings are important for savings analysis. The MER contractor will compile EER ratings that are as accurate as possible for units installed through the program to be used in the impact and cost-effectiveness analysis.
- A review of the program tracking database indicated that the EER rating is difficult for contractors to provide and that the data provided is often unreliable. Providing data to confirm that equipment meets the minimum EER requirement has proven to be an impediment to the delivery of the program from the contractor's perspective.
- A review of the CEC and CEE databases indicates that the EER performance ratings of the majority of units available on the market are above the minimum level required in order for the program to be cost effective.

As a result of this analysis and program experience, it is recommended that the minimum EER requirement for equipment qualifying for rebates under the program be dropped, and that a graduated incentive structure be adopted for 14 through 18+ SEER units that is more closely aligned with the savings and cost associated with each SEER level.

B. CFL Funding

In June 2005, the Company filed for Commission approval of its Consumer Products Program. That filing included funding for promotion of Energy Star appliances. This component of the program, which was funded at a total of \$330,000 for the 2005-2007 program planning period, was not approved by the ACC in Decision No. 68064. APS is now requesting that this \$330,000 be re-allocated to the CFL measure of the Consumer Products Program because the CFL's have proven to be a high benefit to cost ratio and given the fact the other consumer product measures were not cost effective nor approved at this time.

XI. Non-Residential Program Enhancements

A. Prescriptive HVAC Measures – SEER/EER Changes

Similar to the analysis that was conducted for the Residential HVAC Program, a detailed analysis of the demand and energy savings, incremental cost and cost-effectiveness of SEER rated air conditioning equipment less than or equal to 65,000 Btuh installed in non-residential applications was conducted. The analysis included an assessment of the importance of including both SEER and EER in savings analyses and as qualifying criteria for the program, a review of program tracking database to assess the reliability of contractor reported performance factors, a review of the CEC and CEE databases of air conditioning equipment, and a detailed review and analysis of the savings, cost and cost-effectiveness of this class of equipment to identify potential areas for adjusting both the qualifying criteria and incentive levels. The savings analysis included detailed hourly building energy simulation modeling, and the cost-effectiveness analysis used the revised global variables for avoided cost and discount rate described above.

As with the assessment of residential applications, the analysis revealed the following findings:

- The revised analysis using global, savings performance and cost variables resulted in significantly more favorable cost effectiveness analysis results for this measure in non-residential applications. The more favorable cost effectiveness values and an analysis of product performance in various product databases indicates that the minimum EER requirement can be eliminated and still have a cost effective program.
- Both the EER and SEER ratings are important for savings analysis. The MER contractor (Summit Blue) will compile EER ratings that are as accurate as possible for units installed through the program to be used in the on-going impact and cost-effectiveness analysis.
- A review of the CEC and CEE databases indicates that the EER performance ratings of the majority of units available on the market are above the minimum level required in order for the program to be cost effective.

The Non-Residential Program shared the same issues as the Residential Program for HVAC units less than or equal to 65,000 Btuh. Most customers are aware of SEER values as an energy efficiency indicator for HVAC units, however, customers and many of their contractors are unfamiliar with EER. The concept that for any single SEER rating, different units can have different EER ratings, has been difficult for the market to comprehend. Furthermore, EER values for HVAC units have been difficult to find, and only a small number of HVAC units qualified for incentives. During the first year of this program, the uncertainty generated from lack of information and knowledge of EER values created hurdles to streamlined participation by

customers and their contractors. This issue has been particularly burdensome for school districts, who usually utilize roof top package units.

As a result of this analysis and program experience, it is recommended that the minimum EER requirement for equipment qualifying for rebates under the program be eliminated, and that the current incentive structure with the incremental efficiency incentive based on SEER rating be retained.

B. Study Enhancements

Current Incentive

The technical assistance and study incentive provides up to \$10,000 of incentives for energy feasibility, design assistance, retro commissioning and commissioning for large customers. Currently, the maximum incentive for any one study is \$10,000 and total technical assistance incentives are limited to \$10,000 per year per customer, including customers with multiple sites in APS service territory. In addition, a single project that may be eligible for multiple types of technical assistance is limited to \$10,000 total of technical assistance incentives. Incentives received for studies apply to the large customer incentive annual limit of \$300,000.

The design assistance study is the only study that has energy savings associated with the incentive. The energy savings attached to design assistance assumes an additional 15% of energy savings beyond the installation of energy efficient equipment.

Proposed Modifications

The modification the Company is recommending for the Design Assistance Study for new construction is an incentive-only study with no associated energy savings.

The Company is also recommending that the Retro-commissioning Study capture energy savings associated with the resulting operational changes or service repairs. However, no savings would be associated with capital measures identified by retro-commissioning until the customer applies for the prescriptive or custom incentive associated with those measures. In effect, each retro-commissioning application would be reviewed to determine the savings associated with the operational changes or service repairs (similar to a custom application). Only operational and corrective changes identified in a retro-commissioning study that results in quantifiable and verifiable kWh savings will be counted towards DSM savings.

A similar modification is recommended for commissioning. The Solutions for Business Program would recognize "enhanced" commissioning activities as those performed by a commissioning agent, including reviewing the building and systems design, developing a commissioning plan, verifying proper installation and functional performance of each building system, and providing training and documentation that includes operation and maintenance manuals. A modest amount of energy savings would be captured for these commissioning activities, and commissioning would be reclassified as a "measure," rather than a study.

APS is also proposing an overall modification to all technical assistance and study incentives to change the criteria for the \$10,000 limit per customer to a \$10,000 per facility limit (\$20,000 for retro-commissioning) and maintain the overall \$300,000 annual limit for large customers.

No modifications are recommended for the Energy Feasibility study incentive.

Rationale

Design Assistance

Design assistance does not produce savings unless the facility is built, at which time, incentive applications are submitted for energy savings measures eligible under the Solution for Business Program. By attaching energy savings to technical design assistance, and then again applying savings to the resulting installations, the existing program could double count the savings.

The existing custom application process is designed to capture all energy savings associated with a new building by requiring detailed calculations and building modeling. Therefore, the total project energy savings can be captured with a custom application.

Retro-commissioning

"Retro-commissioning" a building is a process that identifies and addresses energy savings opportunities in two ways:

1. Operational Savings/Service and Repair: These recommendations are usually low or no cost to implement and result in immediate savings. Examples of these include changing HVAC setbacks, repairing economizers or sealing air leaks in ductwork.
2. Capital improvements: These recommendations are usually high cost and involve replacing and/or reconfiguring building systems.

The current DSM programs are designed to recognize energy savings associated with capital improvements when prescriptive or custom applications are ultimately submitted for these investments. The DSM programs do not currently recognize the energy savings associated with operational savings and repairs. These savings will be captured based upon the specific case-by-case recommendations and findings in the retro-commissioning report.

While this recommendation is to establish energy savings for retro-commissioning, it does not include additional financial incentives. The low cost of implementing operational changes and service repairs is adequately compensated under the existing retro-commissioning incentive. The higher incentive cap of \$20,000 per facility is warranted due to the additional effort for retro-commissioning studies, as compared to other types of studies.

Commissioning

A building can have a sound energy efficient design, but the construction process and the installation of building systems can introduce energy losses that cause less than optimal building performance. Building commissioning performed by a commissioning agent to meet enhanced LEED requirements can remedy these losses by testing and correcting building systems and documenting operational and maintenance procedures. Commissioning may produce energy savings by ensuring that the building was constructed and can operate according to how it was designed. These savings will be captured based upon the specific case-by-case recommendations and findings in the commissioning report.

The building commissioning process can be labor intensive. Most of this labor comes from contractors who are responsible, under their installation contracts, to commission their portion of the building systems. These costs should not be allowed by the program. The commissioning agent is responsible for reviewing the building and systems design, developing a commissioning plan, verifying proper installation and functional performance of each building system, and providing training and documentation that includes operation and maintenance manuals. Allowed costs should be limited to these tasks.

Modification to the \$10,000 per Customer Limit

The Company is recommending that the existing limit of \$10,000 per customer be modified to \$10,000 per facility for technical assistance and studies limits potential energy savings, for the following reasons:

1. On the supply side, multi-facility customers make up a major market for building commissioning agents and retro-commissioning companies due to efficiencies in the sales and implementation processes. Currently, few of these companies are selling their services in the Arizona market. Limiting incentives to only one facility of a multi-facility customer provides little stimulus for these companies to pursue this market.
2. On the demand side, a majority of multi-facility customers make facility related decisions for all or groups of their properties. A single \$10,000 incentive limited to one building provides less motivation to pursue technical assistance than it would for a single-site customer.
3. On the marketing side, gaining program participation from a customer that can replicate energy savings measures and practices at other sites in APS service territory offers greater program efficiency in achieving energy savings.

Expanding the technical assistance incentives to multiple sites removes barriers to participation by this segment. The current \$300,000 annual incentive cap per customer protects the program from a small group of large customers receiving the majority of the program's incentives.

C. Custom Application Enhancements – No Double Counting

Current Policy

The Non-Residential Program currently has separate incentives for prescriptive measures and custom measures. If a customer has both prescriptive measures and custom measures, they must submit them on separate applications and provide separate documentation for each.

In the current approach to evaluating projects with both prescriptive measures and custom measures, the prescriptive measure energy savings are subtracted from the custom measure energy savings and submitted in a separate application to ensure that there is no double counting of energy savings. All applications are checked to ensure that incentives are not paid twice for the same measure.

Proposed Modifications

The Company is proposing that in cases where there is an integrated building energy simulation that identifies energy savings through the custom program that the prescriptive and custom measures are allowed to be combined into one custom application and treated as a single custom measure. One TRC test would be calculated for this single custom measure.

As with any application, program processes are in place to eliminate double counting of energy savings and incentives. These processes include comparing all in-coming applications against previously received applications for the same customer and/or address. When subsequent applications are submitted for the same address, they are evaluated against the previous application files to ensure that measures are not duplicated.

Rationale

Many energy saving measures have interactive effects that are quantified through an integrated building energy simulation. For example, reducing the lighting load will also reduce the air conditioning energy consumption. Multiple measures may include building envelope measures, lighting measures, and air conditioning measures that have many interactive effects; the only way to determine the energy savings is through computer energy simulation.

In the above scenario, it can be difficult to separate energy savings due to individual prescriptive measures from energy savings due to individual custom measures. This then becomes a barrier to customers applying for incentives because they do not know which kilowatt-hours will be taken out and attributed to prescriptive measures. The customer also does not know how much the incentive will be until the Solutions for Business team determines the allocation of savings between measures.

This in-depth implementation review involves separating the energy savings from the custom measures and prescriptive measures, which causes high administration costs for the program.

The combining of prescriptive measures and custom measures into one custom measure application provides a more accurate savings estimate than the way APS is currently required to analyze these applications. This is because computer energy simulation takes into account these interactive effects through hourly load and weather simulation.

D. Small Business Program (Customer Size) Enhancement

Current Policy

The small business incentive category is currently defined as a customer with 200kW or less of aggregate demand. Incentive funds have been allocated for this customer group, and incentives are limited to prescriptive measures for new construction, major renovation, equipment replacement and retrofit. Small business customers are not eligible to apply for custom measures and studies.

As stated in the Small Business Program Status and Activities section, APS has had limited success reaching small business participants, even with the efforts put forth to specifically engage this segment. Therefore, program modifications as described below are needed to successfully reach this market segment and engage small businesses to participate in APS' Small Business Program.

Proposed Modifications

The proposed modifications to the current program address the specific barriers to participation for the very small customer. In summary, the proposed programmatic changes will focus on the customer segment with the largest barriers and provide the incentives and delivery mechanism to gain participation in the program.

- Change the small business customer classification to 100kW and below from 200kW and below aggregate monthly demand. This provides the structure to focus on those customers with the greatest barriers to participation, and allows the medium sized businesses (100 to 200 kW) to participate in the other program components, such as studies and custom projects. The smaller customer tends to have low demand for these program components.
- Re-allocate the program budget in future DSM planning years to reflect the size qualification change above. Based on a \$16 million total DSM budget year, the Small Business Program is currently funded at \$1.45 million at the current 200 kW or less qualification. The Small Business Program funding level should be reduced to approximately \$975,000, and the balance of approximately \$475,000 would then be utilized in the revised Existing Facilities Program for customers with aggregated demands greater than 100 kW. This \$975,000 budget is still an aggressive goal for the Small Business Program.
- Include all new construction projects under the New Construction Program regardless of project size.
- The Small Business Program will involve two components: direct-install retrofit incentives and replace-on-burnout ("ROB") incentives. The direct-install retrofit component will work with contractors to provide a turn-key offering of various retrofit measures, such as lighting equipment upgrades, new lighting controls, programmable thermostats, HVAC system tune-ups, and select refrigeration measures. Since the decision to install an energy-efficient air conditioner or motor tends to only occur when the previous equipment reaches the end of its useful life, these measures are not appropriate for a direct install approach. Incentives for ROB measures will be provided under a second component and the current incentive levels appear to be appropriate for these measures.
- In order to encourage contractors to participate in a turn-key or direct-install style approach in the small business market, the incentives for various retrofit measures will need to be increased. The incentives should be set at a level of \$0.15 to \$0.20 per annual kWh saved and typically cover from 75 to 100% of the incremental cost. This market segment generally requires a simple investment payback of one year or less before they will participate.
- The direct-install component will utilize an on-line proposal generation and project tracking application to reduce the transaction costs of the contractor, which will result in lower costs for the participants.

Rationale

Program participation of small businesses has been very low in the first year of the program, even with targeted marketing efforts that have focused on trade shows geared toward a small business audience, Chamber of Commerce events and newsletters, and trade ally customer outreach. This result is not surprising given that nearly all utilities in the United States have needed to design a special targeting program to achieve penetration in this segment.

Beginning in January 2007, a new tactical plan to reach small business was implemented. This initiative leverages existing APS relationships among Chambers of Commerce, downtown community/redevelopment groups, cities, and other organizations that focus on small businesses. In the first two quarters of 2007, a specific geographical area around the state will be targeted

each month for outreach through group newsletters, presentations, radio and print opportunities. Specific collateral materials that focus on the small business audience have been developed to support this effort. While the new tactical plan will increase awareness of the program to small businesses, other program experiences across the United States has demonstrated that targeted marketing alone cannot overcome these barriers to participation. Furthermore, such high levels of marketing efforts, combined with relatively low program participation, result in expensive cost/kWh savings for this sector. In the first year of the program, the cost of the Small Business Program was over five times that of the Existing Facilities Program on a cents/kWh saved basis.

There is significant opportunity for energy savings in small commercial customer facilities, including convenience stores, retail and office. However, several barriers are encountered on a frequent basis, which need to be addressed in the program design and solutions developed that lead to successful recruitment of program participants. Some of the largest barriers are leased space, capital cost, project lead time and the complexity of meeting program requirements to obtain program funding.

DSM small business programs across the United States that have high participation have a combination of features to reach this market, and result in energy savings from installed energy efficiency measures. Examples of programs and their key features are listed below.

- The EZ-Turnkey Program offered by San Diego Gas and Electric provided incentives equal to 100% of the full retrofit costs to their small business facilities with peak demand below 20 kW.
- The B.E.S.T. Program implemented by KEMA Inc. in various cities throughout California paid between 75% and 100% of the full retrofit costs for small business facilities with peak demand below 100 kW.
- The Small Business Energy Advantage Program offered by Northeast Utilities pays 50% of the lighting retrofit costs and 100% of non lighting retrofits costs.
- The Small Business Solutions Program offered by NSTAR offers a free energy audit to identify energy saving opportunities, and will also pay up to 80% of the total cost for retrofitting qualifying lighting and mechanical systems to customers whose average monthly demand is 100 kW or less.
- Massachusetts Electric and Nantucket Electric provide free audits and up to 75% of the cost of installation for energy saving improvements through their Small Business Energy Efficiency Program, which is open to customers with an average demand of 200 kW or less.

Small businesses often lack the capital, expertise, and time necessary to assess and act on energy-efficiency opportunities comprehensively and confidently. The proposed modifications to the Small Business Program mitigate these barriers effectively by lowering the capital ("first") cost, minimizing customer inconvenience and transaction costs, and reducing real and perceived risks associated with equipment performance and contractor reliability.

Barriers to participation from small businesses:

Lack of access to capital/first cost: Small commercial customers, particularly in the current business climate, have limited access to capital. Because of this and other barriers, these customers rarely make energy-efficiency related investments if they have payback periods of

more than a few months. Based on past experience with these types of customers, a small commercial comprehensive program would be structured to offer incentives that pay for a majority of the project cost in order to achieve participation and measure penetration in this market.

Split incentives: Cases in which the incentives of an agent charged with purchasing energy efficiency (owners) are not aligned with those of the persons who would benefit from the purchase (tenants). Historically, fewer energy efficiency measures are installed in leased space because building owners generally pay for the retrofit, but the renter benefits from the energy savings. This provides little incentive on the part of the owner to invest in energy efficiency. Research³ has shown that renters are willing to share in the cost of energy efficiency improvements with their building owner when payback periods are less than or equal to the time remaining on their lease.

Inconvenience or transaction costs: The indirect costs of acquiring energy efficiency, including the time materials and labor involved in obtaining or contracting for an energy efficient product or service. The recently completed APS Energy Efficiency Market Potential Study found that businesses that use over 200 kW were more likely to rate their company's investment for energy efficiency higher than businesses that use less than 200 kW (33% vs. 18%), and larger businesses describe themselves as more knowledgeable about energy efficiency, as compared to smaller businesses. A small commercial comprehensive program would be contractor driven, and would reduce the inconvenience and contractor transaction costs by offering comprehensive measures and cross-referrals. On-site facility assessment would provide customer education with a follow-up of energy analysis, feasibility analysis, financial incentives, equipment procurement and installation.

Information or search costs: The costs of identifying energy-efficient products or services or learning about energy-efficient practices, including the value of time spent finding out about and locating a product or service or hiring someone else to do so, is a barrier to small businesses. They generally do not have energy professionals on staff to assess and provide advice on energy projects. The Small Business Program would be specifically designed to reduce the information and search costs for small customers. Marketing and outreach activities would increase customer awareness of cost-effective measures and cross-referrals would assist the customers in the participation process and installation of comprehensive measures.

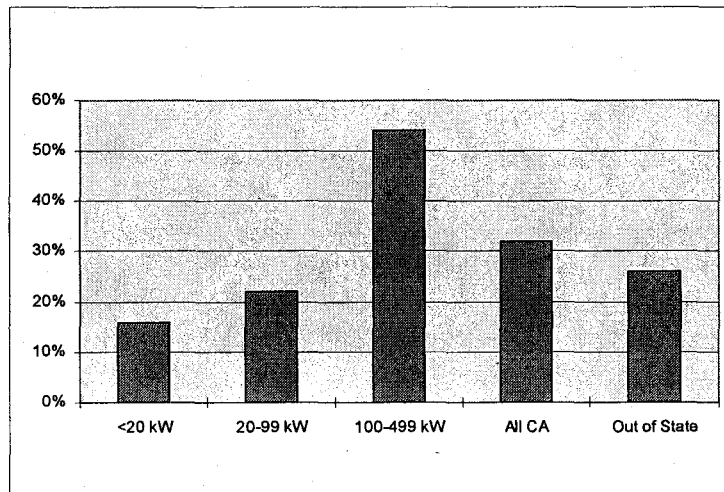
Performance Uncertainty and Hidden Costs: Most small businesses have little time to research the performance of energy efficiency measures and are hesitant about unfamiliar product offers that claim to save them money. An effective small business program must address customers' concerns by providing targeted information documenting the proven energy savings from program measures and the reliability characteristics of efficient equipment. Requiring longer term equipment warranties can also reduce this barrier.

The smallest customers are several times less likely than large customers to use any kind of formal investment analysis as part of their decision to purchase energy-related equipment. Small commercial customers are also unlikely to have anyone on staff responsible for understanding

³ *Statewide Small/Medium Nonresidential Customer Wants and Needs Study, Draft Report*, prepared by Quantum Consulting Inc. and XENERGY Inc. for Pacific Gas & Electric Company ("PG&E"), January, 2002.

and managing energy costs, unless they are part of a major chain organization. These customers also tend to replace existing equipment with similar equipment upon failure.

Exhibit 18
Percent of Customers Who Report Using Formal Investment Analysis for
Energy-Related Capital Investments*



*Source: 1999 Statewide Small/Medium Nonresidential MA&E Study, prepared by XENERGY Inc. for PG&E, December, 2000. Data are from PG&E's 1997 Commercial Building Survey Project.

Another key factor that correlates strongly with the lower penetration rate of measures among small commercial customers is the high proportion of renters in this group. Exhibit 19 shows that very small businesses are more likely to lease or rent space than larger businesses. Exhibit 20 shows that almost all small businesses that rent are still responsible for paying their own electric utility bill.

Exhibit 19
Percent of Businesses That Lease or Own Business Space

Response	<20 kW	20-99 kW	100-499 kW	All CA	Out of State
Own	40%	51%	59%	50%	59%
Lease/rent	60%	48%	40%	49%	40%
Don't know/refused	0%	1%	1%	1%	1%
# Respondents	129	142	132	403	200

Source: 1999 Statewide Small/Medium Nonresidential MA&E Study, prepared by XENERGY Inc. for PG&E, December, 2000.

Exhibit 20
Percent of Renting/Leasing Businesses That Pay the Electric Bill

Response	<20 kW	20-99 kW	100-499 kW	All CA	Out of State
Pay all of bill	99%	90%	89%	93%	76%
Pay portion of bill	1%	3%	3%	2%	6%
Pay none of bill	0%	5%	6%	3%	16%
Don't know/refused	0%	2%	2%	1%	3%
# Respondents	76	64	47	187	83

Source: 1999 Statewide Small/Medium Nonresidential MA&E Study, prepared by XENERGY Inc. for PG&E, December, 2000.

The Small Business Program must use an innovative approach to provide services to the hard-to-reach small commercial market segment. The direct-install program concept has a proven track record of high participation rate and cost-effective life cycle savings for hard to reach markets. The challenge of this approach has been to successfully balance marketing and administrative costs with incentive levels in order to maximize cost effectiveness. The proposed program design minimizes marketing and transaction costs, while maximizing penetration and, therefore, cost-effectiveness.

The most cost-effective approach to any program is highly dependent upon the characteristics of the target market for which savings are desired. For certain markets, approaches that involve high levels of effective information dissemination and moderate incentives provide the most cost effective solution. The Company's experience in delivering and evaluating commercial programs indicates that this is not the case for small and very small businesses, especially those in economically depressed areas. As noted in previous sections, the historical evidence demonstrates clearly that very small commercial customers will not adopt efficiency measures or participate in efficiency programs at meaningful levels without a combination of high incentive levels and complete turnkey services.

Exhibit 21 displays the typical relationship between incentive levels and penetration rates among small commercial customers. This and the following graph were developed by KEMA based on actual experience implementing commercial energy efficiency programs during the past 15 years. The largest increases in penetration occur when the incentive percentage of total installed cost is between 50% and 80%. Incentives of 50% will only result in market penetration around 30%, while 80% incentives will encourage roughly two-thirds of the market to participate.⁴

⁴ A similar curve, based on results from aggressive programs targeted toward small commercial customers, was recently developed from program experience in New England, Mosenthal and Wickenden, "The Link Between Program Participation and Financial Incentives in the Small Commercial Retrofit Market," 1999 Energy Program Evaluation Conference, Denver, Colorado (August 1999). The curve developed by these authors is similar to, but slightly less steep than, the one developed by Warner.

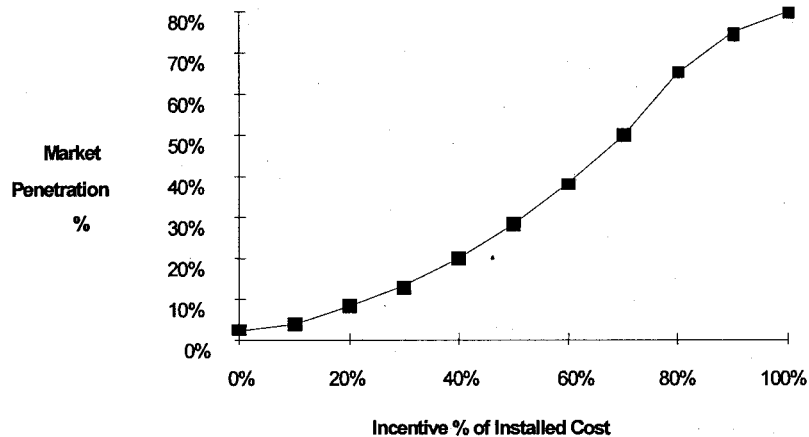
Exhibit 21**Market Penetration as a Function of Incentive Level for Small Commercial Customers**

Exhibit 22 displays the relationship between incentive levels and total resource costs per MWh saved that can be obtained from the small business segment.

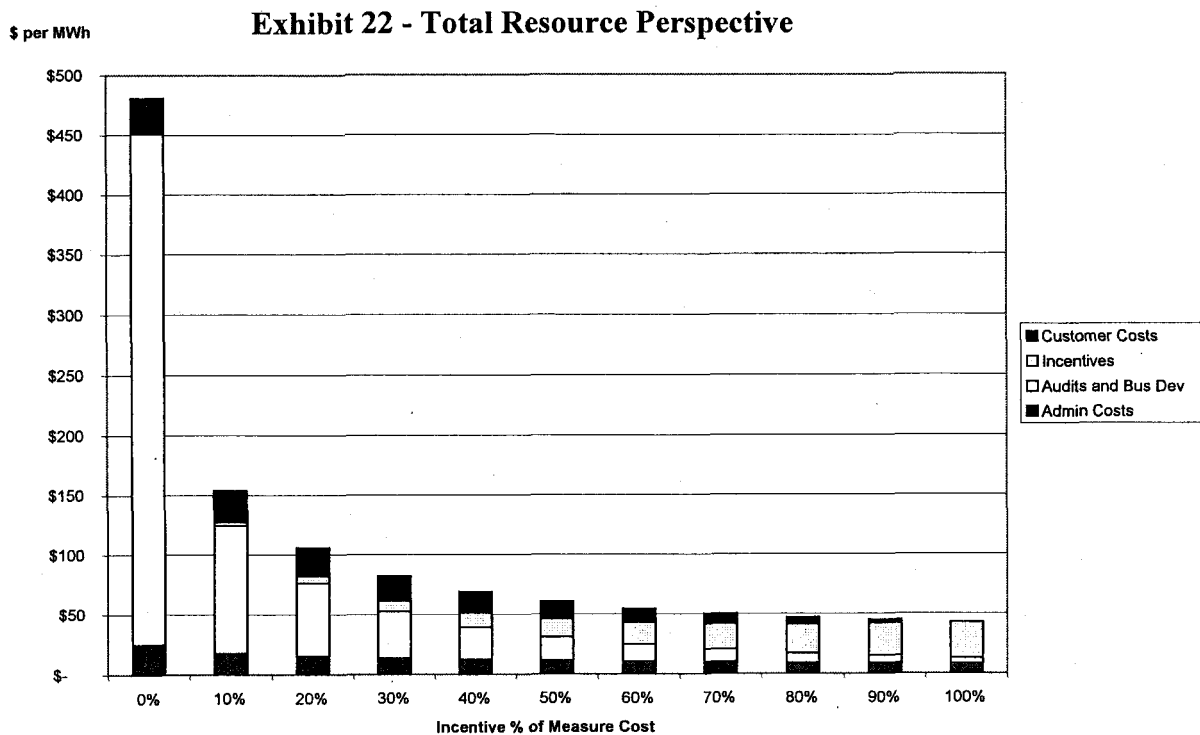
The total cost of the measure equals the incentive plus the cost paid by the customer. While the total cost of the measure does not vary based on the amount of the incentive, the cost to administer the program and the cost to total cost to market the program and conduct energy audits will decrease significantly as the incentives are increased, resulting in higher market acceptance.

The lower total resource cost that results from higher incentives largely occurs from having to conduct a fewer number of facility audits to achieve a given amount of energy savings. As an example, low incentives might translate to only a 5% acceptance rate, which would imply that 20 facility audits would be required before one customer decides to move forward with an energy saving project. A very high incentive that covered most or all of the measure cost might translate to a 50% acceptance rate, and, thus, only two audits would be needed per project. The audit costs per kWh saved from lower incentives could be 10 times higher than the audit cost per kWh when high incentives are offer.

In essence, it reveals that lower incentives for small business energy efficiency projects require higher marketing and business development costs in order to achieve program participation. As incentives are raised, small businesses, and the trade allies that serve them, require less market prodding to participate. As participation increases, certain fixed marketing and administration costs are spread over more MWh's, so the cost per MWh declines. It is important to note that the entire (total resource) costs, including those paid by the customer, are reduced as incentives are increased.

Exhibit 22 was developed by KEMA based on actual experience implementing commercial energy efficiency programs during the past 15 years. In a direct-install program for the small business market, the total resource cost per MWh saved decreases as the incentive levels

increase. This supports high incentive levels for the small business market (> 75%). In other words, Exhibit 22 depicts better results with higher incentives versus other resource costs to effectively reach small customers.



Analysis of Small Business Energy Efficiency Measures

The proposed Small Business program has been modified to include a direct-install component. This program targets the very small commercial market and is an enhancement to the Solutions for Business Program. The Small Business Program will be an upstream market program providing incentives directly to contractors for the installation of selected high efficiency lighting and refrigeration measures. The incentives will be set at a higher level for this market in order to motivate contractors to sell and deliver the program, thus offsetting the need for APS marketing and overhead expenses. In order to further reduce overhead expenses, the program will employ internet measure analysis and customer proposal processing, which will make the process easy for both contractors and customers. The program is designed to minimize common barriers to implementation of energy efficiency improvements in this market, including lack of capital, inconvenience factor, information search costs, transaction costs and performance uncertainty. The Company is proposing that the following measures be included in the program:

Lighting Measures:

- T8 lighting retrofits – This measure provides for retrofits of T12 fluorescent lighting with T8 lighting, similar to the Existing Facilities Program. An incentive \$0.15/kWh annual saved will be offered.
- Screw-in and hard-wired CFL retrofits – This measure provides for replacement of incandescent lamps with screw-in fluorescent lamps, similar to the Existing Facilities Program. An incentive \$0.02/kWh annual saved will be offered.

- Exit sign retrofits – This measure provides for retrofits of incandescent and CFL exit signs with light-emitting diode (“LED”) lights or electroluminescent exit signs lighting similar to the Existing Facilities Program. An incentive \$0.15/kWh annual saved will be offered.
- Occupancy sensors on lighting – This measure provides for installation of occupancy sensor controls, similar to the Existing Facilities Program. An incentive \$0.15/kWh annual saved will be offered.
- De-lamping – This measure provides for de-lamping of fluorescent fixtures lighting, similar to the Existing Facilities Program. An incentive \$0.12/kWh annual saved will be offered.

Refrigeration Measures:

- Integrated refrigerated case controls and motor retrofits – This measure provides for retrofitting refrigerated cases in non-residential businesses with control systems and other measures that reduce case energy use. The integrated package includes fan and anti-sweat heater controls, replacing fans with high efficiency models, and other component controls. The measure was found to be cost effective and is recommended for inclusion in the program. An incentive \$0.20/kWh annual saved will be offered.
- Refrigerated case evaporator fan controls – This measure provides for installation of refrigerated case evaporator fan controls. An incentive \$0.20/kWh annual saved will be offered.
- Refrigerated novelty case controls – This measure provides for installation of refrigerated novelty case on/off controls. An incentive \$0.20/kWh annual saved will be offered.
- Anti-sweat heater controls– This measure provides for installation of refrigerated case anti-sweat heater controls. An incentive \$0.20/kWh annual saved will be offered.
- Refrigerated case fan motor retrofit – This measure provides for the retrofit of refrigerated case fan motors with high-efficiency motors. An incentive \$0.20/kWh annual saved will be offered.
- Occupancy sensor controls on vending machines – This measure provides for installation of occupancy sensor controls on vending machines similar to the Existing Facilities Program. An incentive \$0.12/kWh annual saved will be offered.

The savings and cost-effectiveness analysis of these measures is similar to the same measures included in the Solutions for Business Program for larger customers, with the exception that the incentives are estimated on a \$/kWh saved basis as opposed to a \$/unit basis. All measures included in the program under this regime were shown to be cost effective. Exhibit 23 presents a summary of the cost effectiveness analysis for the direct install small business measures.

Exhibit 23
Small Business Direct Install Measures
Cost-Effectiveness Summary

Measure Description	TRC
Replace T12 Systems and Magnetic Ballasts with T8 Systems and Electronic Ballasts	2.3
Energy Efficient Integral CFL	3.0
Energy Efficient Hardwired CFL	1.5
Replace Incandescent and CFL Exit Signs	2.3

Measure Description	TRC
Install Occupancy Sensors on Lighting Fixtures	2.0
Delamp	4.5
Integrated Refrigerated Case Controls and Motor Retrofit	1.2
Anti-Sweat Heater Controls	1.2
High Efficiency Evaporator Fan Motors	1.2
Novelty Cooler Controls	1.2
Evaporator Fan Motor Controls	1.2
Occupancy Sensor Vending Machine and Reach-in Cooler Controls	2.3

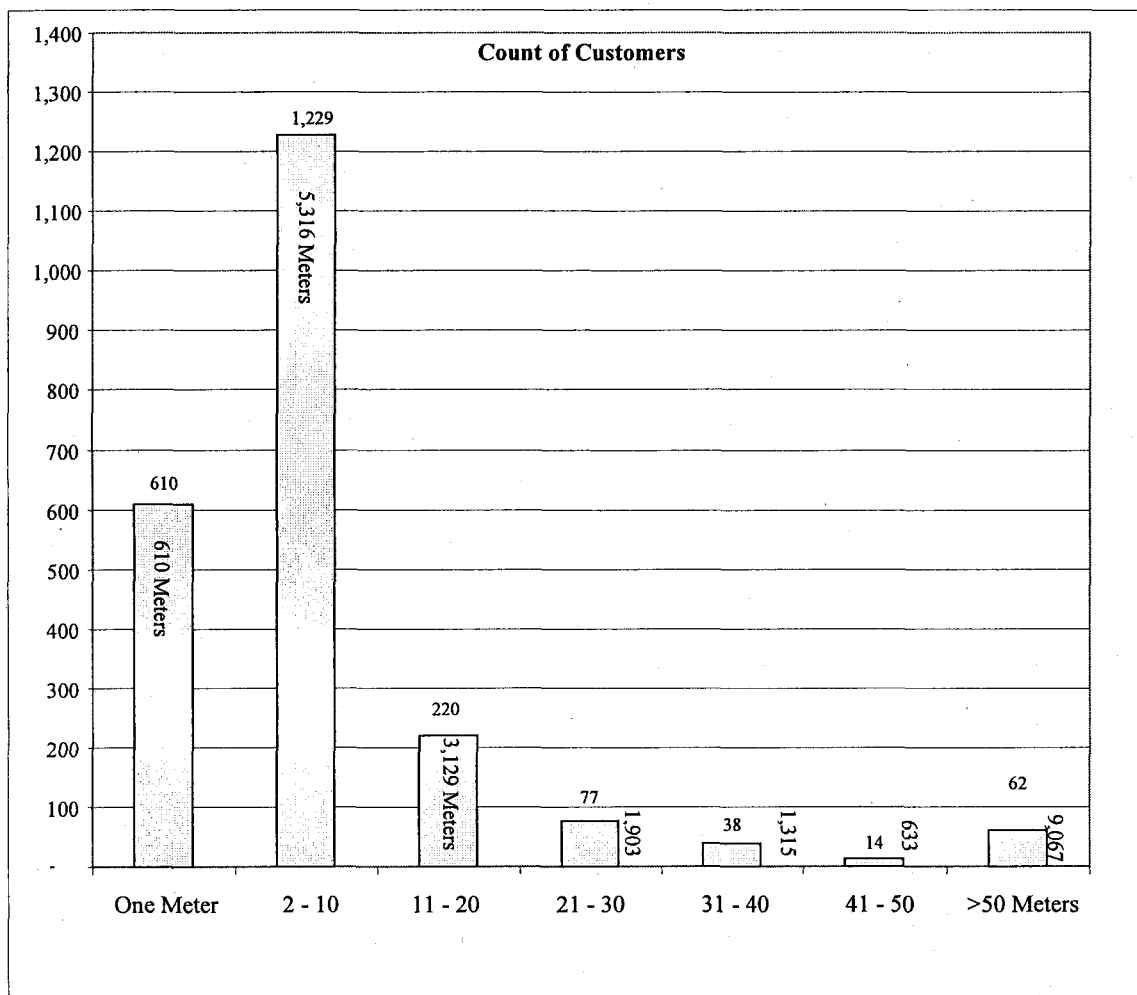
In addition to these direct-install measures, small business customers will also be eligible for all prescriptive measures and custom measures (similar to the Existing Facilities Program).

E. EIS Incentive/Budget Enhancement

The EIS program customer incentive caps were designed around the basis of one meter EIS application costing a maximum of \$1,200. Based on a limit of 75% incentive to incremental cost factor that was used throughout the Non-Residential Programs, the maximum incentive per customers was set at \$900. However, most non-residential customers have more than one meter. The Company has received program feedback from one of its large city customers stating that this customer cap does not make sense for them since they have approximately 300 meters. They would like to see the program cap be raised to recognize the fact that program participants will install EIS on multiple meters within their domain.

The incentive budget over the three-year planning horizon is \$240,000. Assuming the maximum incentive of \$900 per customer, this budget represents 267 customers. There are a total of 2,250 customers that qualify for the program. These customers have 21,973 meters. The majority of the Company's customers that have an aggregated load greater than 200 kW have more than one meter. There are 2,250 customers with an aggregated load of greater than 200 kW of which 1,640 customers (73%) have more than one meter. There are 191 customers (8.5%) with greater than 20 meters, which represents a total of 12,918 meters (59%) of the total number of meters. Exhibit 24 displays a distribution of customers with multiple meters and their corresponding meter counts.

Exhibit 24



The Company is now recommending that the EIS Program incentives be expanded to allow more incentives for those customers with multiple meters. However, the Company still needs to ensure that one customer does not dominate the incentives. Therefore, APS recommends that any one EIS customer be capped at \$12,000 (5% of the EIS incentive budget) over any one year. The customer's EIS incentive would also be limited to 75% of the incremental costs of the EIS equipment and installation costs. In addition, this EIS incentive would be included in the total large customer DSM incentive cap of \$300,000 per year.

F. Prescriptive Measures Additions

A variety of new lighting, HVAC, and envelope energy efficiency measures were analyzed for possible inclusion in the program. The analysis followed the same format and process as that used to examine the existing measures including the specification of measure characteristics (e.g., capacity, efficiency, features), demand and energy performance variables, operational characteristics (e.g., operating hours), and customer costs. As with the existing measures, the analysis included a cost effectiveness assessment according to the TRC test. Each measure was also subjected to a screening process to determine if the measure characteristics and performance

variables could be defined in such a way that they could be formulated as a prescriptive measure; the measure was sufficiently mature to have confidence in its energy and service performance, if offered as a prescriptive measure, and the measure was cost effective. Several of the measures were deemed to be acceptable and are recommended for inclusion in the program, while several of the measures were rejected due to failure to meet one or more of the above screening criteria. Exhibit 25 presents a summary of the analysis of each of the measures examined.

Exhibit 25
Summary of New Measure Analysis

Measure Description	Analysis Results	TRC	Incentive/Incremental Cost
Lighting			
Hardwired CFL's	Cost effective measure. Include as prescriptive measure.	1.9	16%
Induction Lighting	Cost effective measure. Include as prescriptive measure.	2.1	46%
Cold Cathode Lighting	Cost effective measure. Include as prescriptive measure.	3.5	28%
Reduced Lighting Power Density (New Construction)	Cost effective measure. Remove prescriptive lighting measures from non-residential new construction in favor of this performance-based approach.	2.8	31%
HVAC			
Package Terminal AC/HP	Cost effective measure. Include as prescriptive measure.	1.8	48%
Water-Source Heat Pumps	Cost effective measure. Include as prescriptive measure.	1.1	15%
Economizers	Standard practice for larger units but not 5 ton and under. However, not cost effective to retrofit for smaller units. Include as a prescriptive ROB or new construction measure for 5 ton and less.	1.9	19%
Envelope			
Cool Roof Applications	This measure was analyzed during the program planning phase and found to be not cost effective. Was reconsidered due to changed application classification and cost basis.	2.3	49%
High Performance Glazing	Cost effective measure. Include as a prescriptive measure.	2.3	26%
Not Recommended at this Time			
Ceramic Metal Halide	Difficult to standardize application. Leave as a custom measure.	na	na
ES High Intensity Discharge ("HID") with Reflectors	Retrofitting with reflectors not cost effective. Leave ES lamps as a custom measure.	na	na
LED Lighting	Emerging technology; insufficiently mature at this time. Leave as a custom measure.	na	na

New Lighting Measures

- **Hard-Wired Compact Fluorescent Lamp Fixtures** – This measure provides for the replacement of existing incandescent lamp fixtures with fixture with dedicated hard-wired CFL configurations. This strategy assures that the savings associated with CFL lamp technology will persist beyond the initial lamp life and will be retained on the APS system over the life of the fixture. The measure will offer incentives of \$15 to \$20 per fixture depending on the fixture wattage.
- **Fluorescent Induction Lighting** – Fluorescent induction lighting uses a technology of light generation that combines the basic principals of induction and gas discharge in an A-lamp design. These systems do not employ electrodes and deliver up to 100,000 hours high quality white light, and offer a viable option to HID lighting in applications where replacing lamps is difficult, such as transportation tunnels. These systems offer improved energy efficiency, but also cost up to three times as much as HID system that yield similar lumen output. The analysis of this technology yielded a passing TRC on retrofits of 250 and 400 watt metal halide and high pressure sodium fixtures. These measures will receive a prescriptive incentive of \$150 per fixture.
- **Retrofit of Incandescent Lamps to Cold Cathode Lamps** – Cold cathode fluorescent lamps operate at higher voltage and lower current than conventional fluorescent or incandescent lamps. The higher voltage overcomes the need to heat the tube while the lower arc current greatly extends the life of the discharge electrodes. Dispensing with the wasteful heated electrodes allows high efficiency to be achieved in a small lamp. Cold cathode lamps are typically 10 to 30% more efficient than a comparable hot cathode fluorescent lamp, and up to 90% more efficient than incandescent lamps. Cold cathode lights have a life expectancy more than twice that of typical compact fluorescent lamps or long life rated incandescent lamps. Cold cathode lamps are designed to be similar in size to a standard incandescent lamp bulb, and can be used in virtually any lighting appliance fitted with a 27 mm Edison socket. Cold Cathode lamps are expensive and are best applied in long run hour application, such as outdoor advertising signs. The analysis indicated that retrofits of 25 to 75 watt incandescent lamps to 3 to 8 watt cold cathode lamps is cost effective and will receive a prescriptive incentive of \$3.50 per lamp, independent of cold cathode lamp wattage.
- **Eliminate prescriptive measures in new construction in favor of a Lighting Power Density ("LPD")** – Many of the prescriptive measures included in the program are now standard practice in new construction. Still, there are opportunities to save energy and reduce demand through more efficient space lighting design and lighting optimization in new construction. The LPD approach examines the watts/square foot of a baseline design compared to and energy efficient design. This is a performance-based approach that is preferred in new construction, and it is recommended that this approach be adopted for new construction lighting applications. The measure will provide an incentive of \$350 per kW saved.

New HVAC Measures

- **Water-Source Heat Pumps** – Water-Source Heat Pumps ("WSHP") were not included in the program planning phase analysis. However, they are a viable technology with a tier of equipment that is high efficiency. They do have a range of applications in the APS market, particularly in schools. Energy efficient WSHP technology was examined and found to be

cost effective and recommended for inclusion in the program as a prescriptive measure. An incentive of \$25 per ton and \$15 per incremental EER improvement will be offered.

- **Package Terminal Air Conditioners and Heat Pumps** – Package Terminal Air Conditioners and Heat Pumps (“PTAC/HP”) fill a particular market niche (e.g., hospitality applications), and have a tier of equipment that is high efficiency. Energy efficient PTAC/HP technology was examined and found to be cost effective and recommended for inclusion in the program as a prescriptive measure. An incentive of \$45 per ton and \$15 per incremental EER improvement will be offered.
- **Economizers** – Economizers on larger units (over 5 tons) are perceived to be standard equipment; however, on smaller units, they are often not included. It is not cost effective to add economizers as a retrofit to units 5 tons and less. However, adding them as an incremental feature in new construction or ROB applications was found to be cost effective and is thus recommended for inclusion as a prescriptive measure. An incentive of \$15 per ton for units 5 tons and less will be offered.

New Envelope Measures

- **Cool Roof Applications** – This measure was examined during the program planning phase and was found to not be cost effective. However, the measure was re-examined using the revised global variables and using a revised cost basis for comparison. The planning analysis incorrectly assumed a fully installed cost for most applications, and upon further review, it was determined that the appropriate cost basis was an incremental cost for most applications. This, along with the changes to global variables, has resulted in a much more favorable cost effectiveness analysis. Thus, this measure is recommended for inclusion in the program as a prescriptive measure. An incentive of \$0.15 per square foot for single-ply membranes and \$0.25 per square foot for coatings will be offered.
- **High Performance Glazing** – High performance glazing includes non-residential window systems with u-values and solar heat gain coefficients (“SHGC”) that are lower than common or standard practice. The analysis for this measure indicates that there is room for improvement in the control of solar loads and consequent reduction in cooling requirements through high-performance glazing technologies. The analysis revealed that this measure is cost effective, and it is recommended for inclusion in the program as a New Construction prescriptive measure. An incentive of \$0.50 per square foot will be offered.

XII. Non-Residential Incentive Summary

The comprehensive measure review, the analysis of new measures and the revisions to the Small Business Program has led to a revised schedule of energy efficiency measures to be included in the program. The revised prescriptive measure schedule provides a wide range of energy saving opportunities and options to APS’ non-residential customers, including several new prescriptive measures that expand the scope of opportunities and fill certain gaps in the original program offering. The revised measure and incentive schedule is summarized in Exhibit 26.

Exhibit 26
Non-Residential Incentive Summary

Measure Description	Minimum Qualifying Criteria	Incentive Level (\$)
LIGHTING MEASURES		
Replace T12 Systems and Magnetic Ballasts with T8 Systems and Electronic Ballasts	---	\$5.00/lamp \$8.00/lamp (premium)
Replace HID Systems with Linear Fluorescent T8 and T5 Systems	---	\$75 - \$200/fixture
Induction Lighting *	---	\$150/fixture
Energy Efficient Integral CFL	---	\$1.75/lamp
Energy Efficient Hardwired CFL*	---	\$15 - \$20/fixture
Replace Incandescent and CFL Exit Signs	---	\$25/fixture
Install Occupancy Sensors on Lighting Fixtures	---	\$0.12/kW connected
Daylighting Controls	---	\$0.12/kW connected
Delamping*	---	\$5.00/lamp
Cold Cathode*	---	\$3.50/lamp
Reduced Lighting Power Density ("LPD")*	Must exceed ASHRAE LPD	\$350/kW reduced
HVAC MEASURES		
Install Energy-Efficient Water-Cooled Chillers*	Minimum IPLV per ASHRAE 90.1-2004	\$7/ton (<300T) \$10/ton (≥300T) + \$300/ton/IPLV increment
Install Energy-Efficient Air-Cooled Chillers	Minimum IPLV per ASHRAE 90.1-2004	\$7/ton (<150T) \$10/ton (≥150T) + \$300/ton/IPLV increment
Air-Cooled Packaged AC/HP – Single Phase, SEER Rated*	14 SEER	\$50 - \$150/ton
Air-Cooled Packaged AC/HP – Three Phase, EER Rated*	11.1 EER	\$50/ton (<11.25T) 25\$/ton (≥11.25T) + 50/ton/IPLV
PTAC/HP*	Minimum EER per ASHRAE 90.1-2004	\$45/ton + \$15/ton/EER increment
HVAC Quality Installation (Non-Residential)	---	Phase 1: \$180/unit Phase 2: \$225/unit + \$15/ton
System Testing and Repair (Non-Residential)	---	Phase 1: \$120/unit Phase 2 (RCAF): \$120/unit + \$15/ton Phase 2 (DS): \$225/unit + \$15/ton Phase 2 (Econ): \$75/unit
Programmable Thermostats		\$50/unit
Water-Source Heat Pumps*	Minimum EER per ASHRAE 90.1-2004	\$25/ton + \$15/ton/EER increment
Economizers*		\$15/ton
ENVELOPE MEASURES		
Cool Roofs*	Min. initial reflectance of 0.7 and minimum initial emittance of 0.75	\$0.15 - \$0.25/sq.ft.
High Performance Glazing*	Max. U-Value of 0.495 Max. SHGC of 0.49	\$0.50/sq.ft.
MOTOR MEASURES		
Open Drip-Proof (ODP) Motors; 1200 - 3600 RPM	NEMA/CEE minimum efficiencies for premium motors	\$1.50 - \$10/HP

Measure Description	Minimum Qualifying Criteria	Incentive Level (\$)
Totally Enclosed Fan-Cooled (TEFC) Motors; 1200 - 3600 RPM	NEMA/CEE minimum efficiencies for premium motors	\$1.50 - \$10/HP
VSD's	---	\$50/HP
REFRIGERATION MEASURES		
Anti-Sweat Heater Controls	---	\$200/unit
High Efficiency Evaporator Fan Motors	---	\$10/motor
High Efficiency Reach-in Refrigerators and Freezers	---	\$75/unit
High Efficiency Ice Makers	---	\$45/unit
Strip Curtains and Night Covers	---	Strip curtain: \$5/unit Night cover: \$10/unit
Occupancy Sensor Vending Machine and Reach-in Cooler Controls	---	Refrigerated Case: \$100/unit Snack Machine \$25/unit
CUSTOM AND TECHNICAL ASSISTANCE MEASURES		
Custom (New Construction)	---	\$0.11/annual kWh savings or 50% of incremental cost
Custom (Existing)	---	\$0.11/annual kWh savings or 50% of incremental cost
Retro-commissioning*	---	50% of cost up to \$20,000 per project
Commissioning*	---	50% of cost up to \$10,000 per project
Design Assistance and Feasibility Studies*	---	50% of cost up to \$10,000 per project
SMALL BUSINESS Direct Install MEASURES – based on annual kWh saved		
Replace T12 Systems & Magnetic Ballasts w T8 Systems & Electronic Ballasts*	---	\$0.15/kWh
Energy Efficient Integral CFL *	---	\$0.02/kWh
Energy Efficient Hardwired CFL) *	---	\$0.15/kWh
Replace Incandescent and CFL Exit Signs*	---	\$0.15/kWh
Install Occupancy Sensors on Lighting Fixtures*	---	\$0.15/kWh
Delamping and Replace 4-lamp T12 Systems with T8 Systems*	---	\$0.12/kWh
Occupancy Sensor Vending Machine and Reach-in Cooler Controls*	---	\$0.12/kWh
Integrated Refrigerated Case Control and Motor Retrofit*	---	\$0.20/kWh
Refrigerated Case Evaporator Fan Controls*	---	\$0.20/kWh
Refrigerated Case Novelty Controls*	---	\$0.20/kWh
Anti-sweat Heater Controls*	---	\$0.20/kWh
Evaporator Fan Motor Retrofit*	---	\$0.20/kWh

* New/Changed Measure. See Appendix A for Current Program Incentives.

XIII. Conclusion

APS is requesting final ACC approval of its Non-Residential Programs, as required in Decision No. 68488. The Company has incorporated results from the first 12 months of implementation, the results of the recently completed Baseline and Market Potential Studies, and the initial MER findings into this report to support the granting of final approval.

The Company is also seeking authorization to modify some of its current DSM programs. APS has recommended modifications to some of the Non-Residential Programs, including the

revision of some prescriptive measures and additional cost-effective measures. These program enhancements should encourage more customers to participate in energy efficiency projects, especially in those hard to reach segments like small business.

The Company is also recommending a modification to the Residential HVAC Program, as directed to in Decision No. 68648. This filing also provides support for program changes in SEER/EER requirements for both the Residential and Non-Residential programs and changes to CFL funding in the Consumer Products Program.

For the reasons discussed in this DSM 13 Month Filing, APS respectfully requests that the Commission grant final approval of these Non-Residential Programs and authorize the program enhancements identified and supported in this report.

Appendix A



**Solutions for
Business**

KEMA 

APS has contracted with KEMA to implement this program. KEMA has provided energy-efficiency implementation services for over 30 years.

Application for Technical Assistance & Studies

How to Participate

1. Submit a Pre-Notification Application to reserve funding. (Optional, but strongly recommended.)
2. Complete the study as required.
3. Complete, sign, and submit a Final Application with appropriate documentation.
4. The incentive check will be sent within 4 to 6 weeks upon approval of the Final Application.



APS Solutions for Business Technical Assistance Application

Check one:

Pre-Notification ☐

Final Application ☐

Customer Information

Name of Project				Business Type: (Please check one) Office <input type="checkbox"/> K-12 School <input type="checkbox"/> College/University <input type="checkbox"/> Retail <input type="checkbox"/> Restaurant <input type="checkbox"/> Hotel/Motel <input type="checkbox"/> Medical <input type="checkbox"/> Grocery <input type="checkbox"/> Warehouse <input type="checkbox"/> Process Industrial <input type="checkbox"/> Other Industrial <input type="checkbox"/> Miscellaneous <input type="checkbox"/>
Name of Organization				
Name on your APS Bill (if applicable)				
Name of Contact Person at Organization		Title		
Telephone Number		Fax #		
Email Address				
Address of Building Assessed in the Study				
City, State, Zip (Study Building)				
Mailing Address of Contact Person				
City, State, Zip (Mailing Address)				
APS Account Number (for existing buildings)	Est. Square Footage			
Taxpayer ID Number	Tax Status (Individual, Partnership, Corp, Exempt)			

Contractor Information

Company Name			
Contact Person		Contractor Phone #	
Mailing Address			
Email Address			

Incentive Check Information

Issue Incentive Check to: (check only one)	<input type="checkbox"/> Send to Customer listed above.	<input type="checkbox"/> I request that the incentive check be issued to the third party indicated below.
Customer Signature (Required if requesting that third party receive check)		
Name of Third Party (Organization receiving check)		
Name of Contact Person at Third Party		Title
Third Party Mailing Address		
Third Party City, State, Zip		
Third Party Telephone	Third Party Fax #	
Third Party Email Address		
Third Party Taxpayer ID Number	Tax Status (Individual, Partnership, Corp, Exempt)	

Technical Assistance Worksheet

Study Type (check one)	Existing Buildings		New Construction & Major Renovation	
	<input type="checkbox"/> Feasibility	<input type="checkbox"/> Retro Commissioning	<input type="checkbox"/> Commissioning	<input type="checkbox"/> Design Assistance
Study Objective (Briefly Describe Project)				
End Uses Analyzed				
Study Contract Date		Completion Date		
List of Major Tasks to be performed as part of the study				
#	Task (provide a brief description for each task)			Cost per task
1				
2				
3				
4				
5				
6				
7				
8				
Total Study Cost				
Incentive - 50% of Study Cost				
Please attach all available supporting documentation, e.g. scope of work. The maximum incentive available is \$10,000 per study. There are Additional Limitations - See Terms and Conditions for details.				

Study Requirements

For Existing Buildings

Retro-Commissioning

Retro-commissioning services are designed to assess the operational and maintenance components of complex HVAC and lighting control systems in existing buildings to develop a strategy to optimize the systems' energy efficiency. Typical tasks include identifying and implementing relatively low-cost operational improvements and documenting these opportunities in a retro-commissioning report.

To be eligible for retro-commissioning services the facilities must have a minimum of 100 tons of chiller capacity. In addition, it is strongly recommended that these facilities also utilize a central building automation system (EMS).

Retro-commissioning will be conducted in two phases:

Phase 1: Establish an energy usage baseline by benchmarking the facility using the EPA ENERGY STAR® Portfolio Manager. For building types not included in Portfolio Manager, an alternative approach can be used to benchmark the energy usage.

- Written authorization is required to be eligible for Phase 2 incentives
- The maximum incentive APS Solutions for Business will pay for any study that completes only Phase 1 is \$250.

Phase 2: At a minimum, retro-commissioning services must involve all of the following activities:

- Review of all applicable equipment sequencing and operating schedules
- Assess the existing condition and operation of economizers
- Assess current control capability
- Review and assess maintenance procedures.

At a minimum, the written report must contain:

- A description and assessment of the energy system(s)
- Recommended actions for system optimization
- Estimated costs and energy impact for each action
- List of actions that were implemented
- Prognosis for remaining recommended actions.

Feasibility Study

Incentives are available to perform detailed engineering analysis to investigate the economics and technical feasibility of one or more energy efficiency investment options.

Applications for approval must include a brief description of each proposed measure including:

- Existing systems or base case and proposed system
- Proposed methodology for analysis
- Estimated potential energy savings and costs to implement
- Estimated schedule to complete each task
- Estimated study cost per task.

A written report must be developed that presents the study findings, methodology and supporting documentation along with completed program energy efficiency applications. This documentation should be provided both electronically and in hard copy. The study must develop estimates of incremental measure costs and energy savings. The accuracy of the estimates should be aligned with the study purpose. Higher accuracy is typically required to make the final investment decision than what is needed to simply screen options for additional study. The study must identify and discuss barriers to implementation in the context of potential project economics.

Study Requirements

For New Construction and Major Renovation Projects

Design Assistance

Incentives are available to help offset the incremental cost of various planning and design activities that have the potential to result in energy savings.

Potential activities that are eligible for an incentive include:

- Business case assessment for energy-saving technologies
- Business case assessment for LEED® certification
- First-time incorporation of energy efficiency concepts into the building design
- LEED® certification process facilitation
- Design document review

The decision to fund a design assistance activity will be made by the APS Business Solutions Team and will be based on an assessment of the activity's potential impact on the energy efficiency of the current and future projects.

Commissioning

Commissioning services are a quality assurance process designed to ensure that complex HVAC, lighting control and energy management systems in new buildings have been installed properly and operate as designed. Commissioning service must also involve operator training and documentation activities provided in a detailed Commissioning Report.

At a minimum, each Report must include the following three components:

- Operator Training
- Written Operation Procedures
- System Testing

Only new buildings and major renovation projects are eligible for commissioning services. Eligible buildings must have at least 25,000 square feet of conditioned floor space.

Buildings with packaged A/C systems will likely find the HVAC Quality Installation Incentive as a superior alternative to a commissioning study.

Terms and Conditions

Introduction

Arizona Public Service Company (APS) is offering incentives under the APS Solutions for Business Program to facilitate the implementation of cost-effective energy-efficiency improvements. KEMA is implementing this program for APS.

Program and Project Eligibility

Incentives for technical assistance and energy studies are available under the APS Solutions for Business Program to non-residential facilities within APS's service territory. Only customers with total aggregated electric demand of greater than 200 kW can receive an incentive for a study. Studies with contracts signed before February 23, 2006 are not eligible for an incentive.

The studies must assess energy usage served through an APS meter with an eligible rate schedule. Most non-residential rate schedules are eligible. The ineligible rate schedules are Solar 1 and 2, E-36, and some Special Contracts.

Please refer to the Program Policies & Procedures for further information regarding eligibility. This document can be found on the APS Solutions for Business section of the APS website: aps.com.

Incentives are available on a first-come, first-served basis.

**APS Solutions for Business
428 E. Thunderbird Road #749
Phoenix, AZ 85022**

Tel: 1-866-277-5605

Fax: 1-866-277-5604

Email: APS.solutionsforbusiness@kema.com

All official program updates will be posted on the APS Solutions for Business section of the APS website: aps.com

Incentive Caps

Incentives are available to cover 50% of the Technical Assistance services, up to a maximum incentive for any one study of \$10,000. Total Technical Assistance incentives are limited to \$10,000 per year per Customer. Contractor labor costs can be considered in measure costs. Customer labor costs will not be considered.

A single project may be eligible for multiple types of technical assistance, however, no project can receive more than \$10,000 total in technical assistance incentives, even if the project spans multiple years. All study incentives apply towards the customer cap of \$300,000 of total incentive payments per calendar year.

Pre-Notification

Submitting a Pre-Notification Application is strongly encouraged for all studies to ensure that the study is eligible for an incentive and to reserve funding.

KEMA will review the study objective and scope and will notify the applicant if the proposed study will qualify for an incentive. A letter acknowledging reservation of funds and the reservation expiration date will be sent to the applicant. Funds will be reserved for 120 days, unless the applicant requests, and is granted, an extension. Reserved funds are not transferable to other projects, facilities, and/or customers.

In order to be eligible, all Pre-Notification Applications should be postmarked no later than November 1, 2007, and studies are requested to be completed by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Final Application

A final application, the study report, and a copy of the invoice that itemizes the study cost by major task are to be submitted after the study is completed. Final Applications and all required supporting documentation should be received by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation. All customer information will be held in confidence.

APS will review the study report and determine if the study requirements are met. APS reserves the right to conduct inspections and/or reduce the incentive payment if APS deems that the study costs are unreasonable for work completed.

AGREEMENT

Tax Liability

Incentives are taxable and if greater than \$600, will be reported to the IRS unless you are exempt. KEMA will report your incentive as income to you on IRS Form 1099 unless you have indicated Corporation or Exempt tax status on the Applicant Information page of the application. Pinnacle West Capital Corporation, Arizona Public Service Company (APS) also known as "the utility," and KEMA are not responsible for any taxes that may be imposed on your business as a result of your receipt of this incentive.

Agreement

As an eligible APS applicant, I certify that I contracted with a qualified firm to conduct an energy efficiency study after February 23, 2006. I have provided the study report and provided documentation establishing proof of payment for the this study. I agree to verification by the utility, KEMA, or their representatives.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number belongs to the applicant.

I understand that the program may be modified or terminated without prior notice.

I understand that this application, the study report, and the paid itemized invoice must be received by KEMA within 60 days after completion of the study.

I understand that this incentive requires that the applicant pay for at least 50% of the cost of the study. Proof of payment may be required.

I understand that APS and KEMA reserve the right to assess whether the study cost is reasonable for the proposed scope of work. Incentives may be reduced if study costs are considered by KEMA to be excessive.

The program has a limited budget. Applications will be processed on a first-come, first-served basis until allocated funds are spent. Pre-Notification Applications are requested to be submitted by November 1, 2007 and Final Applications by November 30, 2007. Applications received after November 30, 2007 may also be eligible based upon funding and program continuation.

I have read and understand the program requirements and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

Customer Signature

Project Completion Date

Third Party Signature
(Required only if receiving check)

Print Name

Total Project Cost

Print Name

Date

Total Incentive Requested

Customer Initials
(Initial here only if requesting the
check be issued to a third party)

Please print out, sign, and return to KEMA.
For Final Applications, sign and submit only after the study has been completed.

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APS Solutions for Business

Supplemental Form for Schools

For Office Use Only
APS#

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All K-12 schools participating in an APS Solutions for Business Program must also submit this form.

Applicant Information

				(Please check all that apply) Elementary (incl. Kindergarten) <input type="checkbox"/> Middle School <input type="checkbox"/> High School <input type="checkbox"/> Alternative School <input type="checkbox"/> Admin Site (non-school) <input type="checkbox"/>
Project / Building Name				
Name of School				
Address Where Measures Installed				
City, State, Zip (Measures Installed)				
County		CTDS Number of School		
Number of Students at School		Entity ID of School		(Please check one) Public <input type="checkbox"/> Charter <input type="checkbox"/> Private <input type="checkbox"/>
# of Buildings at School		Square Footage of All Buildings*		
Name of Contact Person at School		Title		
Telephone Number		Fax Number		
APS Account Number				
School/District Website				
Calendar Type	<input type="checkbox"/> Traditional <input type="checkbox"/> Year-Round <input type="checkbox"/> Other:			

School District Information

Name of School District (if applicable)			
Number of Students in District		Square Footage of All Buildings*	
School District Contact Name		Contact Phone #	

*Provide square footage of all conditioned space, including portable classrooms

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KEMA 

APS has contracted with KEMA to implement this program. KEMA has provided energy-efficiency implementation services for over 30 years.

Solutions for Business

Application for Custom Measures

New Construction Projects

How to Participate

1. Submit a Pre-Notification Application to reserve funding. (Optional, but strongly recommended.)
2. Install the qualified technology.
3. Complete, sign, and submit a Final Application with appropriate documentation.
4. The incentive check will be sent within 4 to 6 weeks upon approval of the Final Application.



APS Solutions for Business

Custom Measures - New Construction

For Office Use Only
APR _____

Check one: Submission Date: _____

Pre-Notification ☐

Final Application ☐

Customer Information

Name of Project		Business Type: (Please check one) Office <input type="checkbox"/> K-12 School <input type="checkbox"/> College/University <input type="checkbox"/> Retail <input type="checkbox"/> Restaurant <input type="checkbox"/> Hotel/Motel <input type="checkbox"/> Medical <input type="checkbox"/> Grocery <input type="checkbox"/> Warehouse <input type="checkbox"/> Process Industrial <input type="checkbox"/> Other Industrial <input type="checkbox"/> Miscellaneous <input type="checkbox"/>
Name of Organization (Project Owner)		
Project Developer (if different than Owner)		
Name of Primary Contact Person	Title	
Telephone Number	Fax #	
Email Address		
Address Where Measures Installed		
City, State, Zip (Measures Installed)		
Mailing Address of Contact Person		
City, State, Zip (Mailing Address)		
APS Account Number (Where available)	Est. Square Footage	
Taxpayer ID Number	Tax Status (Individual, Partnership, Corp, Exempt)	

Contractor Information

Company Name	
Contact Person	Telephone #
Mailing Address	
Email Address	

Incentive Check Information

Issue Incentive Check to: (check only one)	<input type="checkbox"/> Send to Customer listed above.	<input type="checkbox"/> I request that the incentive check be issued to the third party indicated below.
Customer Signature (Required if requesting that third party receive check)		
Name of Third Party (Organization receiving check)		
Name of Contact Person at Third Party	Title	
Third Party Mailing Address		
Third Party City, State, Zip		
Third Party Telephone	Third Party Fax #	
Third Party Email Address		
Third Party Taxpayer ID Number	Tax Status (Individual, Partnership, Corp, Exempt)	

Custom Incentive Worksheet

Please attach supporting documents as described in the specifications.

Item 1			
Description	Annual kWh Savings	\$/kWh	Subtotal
		\$0.11	
	Measure Cost		

Item 2			
Description	Annual kWh Savings	\$/kWh	Subtotal
		\$0.11	
	Measure Cost		

Item 3			
Description	Annual kWh Savings	\$/kWh	Subtotal
		\$0.11	
	Measure Cost		

Item 4			
Description	Annual kWh Savings	\$/kWh	Subtotal
		\$0.11	
	Measure Cost		

Project Completion Date

Incentives cannot exceed 50% of incremental measure cost.

Total Incentive	
------------------------	--

Specifications for Custom Measures

The incentive amount for custom new construction and major renovation projects will be calculated as \$0.11 per estimated kilowatt hour saved (first year only). Actual incentive payments will be based on either (1) documented electrical energy (kWh) reduction or (2) an electrical energy reduction estimate approved by KEMA. Under no circumstances will the incentive payment exceed 50 percent of the energy-efficiency-related project costs, which are defined as the incremental costs associated with implementing the energy-saving measures.

Project Eligibility

Measures or projects not eligible for prescriptive incentives under the APS Solutions for Business Program that result in improved energy efficiency may be eligible for custom incentives. The custom approach encourages an integrated systems approach to incorporating energy efficiency in new construction and major renovation projects. The project must have isolated and measurable or verifiable energy savings. All custom measures must pass a Total Resource Cost (TRC) Test, as defined and calculated by KEMA, using energy savings and measure costs provided by the customer. For more information on the TRC, see the APS Solutions for Business Policy and Procedures Manual. Ineligible projects include (but are not limited to) cool roofs, electrical generation projects including renewables, fuel switching, and customer-owned on-site generation.

Supporting Documentation

In addition to required documentation as described in the Policies & Procedures, please attach supporting documentation, including (but not limited to) the following:

- Complete description of the proposed project, the products and technologies used, and how they will be employed. Include definitions of the base case and details of the proposed equipment (provide manufacturer's specification sheets for both base and proposed cases, if possible).
- All facilities that will be affected by the project; include all APS account numbers, where available.
- Detail cost breakdown by measure.

Savings Calculations

Applicants must provide an energy simulation, or similar engineering analysis spreadsheet, that estimates the annual energy savings. The simulation must include adequate documentation (list all assumptions and inputs), demonstrate annual energy savings over a standard design, and be easily interpreted by a third party reviewer. The energy simulation may be part of LEED® certification.

In addition, include all relevant data that will allow an engineer to duplicate the savings estimate provided, such as:

- Facility physical description and occupancy (including activities in building and hours of operation)
- Hours of operation of the affected equipment
- Ratings of equipment (wattage, nameplate, tonnage, voltage, etc.)
- Measure-by-measure summary of the calculated savings associated with the project
- Describe the basis or rationale for each assumption and variable.

It is up to the applicant to present a convincing case for how energy savings should be estimated. If it is unclear if your preferred method is sufficient, contact us at 866-277-5605. The customer may be eligible for an incentive for design assistance or commissioning studies. See an Application for Technical Assistance & Studies for details.

Energy Savings Analysis

All submitted final documentation will be analyzed to determine project eligibility and to estimate the base case energy usage. Applicants will be responsible for submitting complete documentation that indicates the basis for projected energy savings. We reserve the right to require post measurement and verification for any project. Where applicable, ASHRAE standard 90.1-1999 will be the assumed baseline. In situations not covered by this standard, APS and KEMA will rely on industry accepted standard practices. Customers agree to abide by APS and KEMA's determination of project baselines, which will be based on conservative estimates in absence of hard data. Cases where a baseline energy use cannot be estimated may be disqualified. Energy savings and costs from measures eligible for prescriptive incentives will not be considered when determining the amount of custom incentive. Customers may submit a Prescriptive Application for these measures.

Terms and Conditions (1 of 2)

Introduction

Arizona Public Service Company (APS) is offering custom incentives under the APS Solutions for Business Program to facilitate the implementation of cost-effective energy efficiency improvements. KEMA is implementing this program for APS.

Program and Project Eligibility

Custom incentives for new construction and major renovation projects are available under the APS Solutions for Business Program to non-residential customers within APS's service territory that have an estimated maximum aggregated monthly demand of greater than 200 kW. Projects that are covered under the prescriptive application are NOT eligible for a custom incentive. Retrofit projects should use a Retrofit Application. Energy efficient equipment or services purchased, contracted for or work conducted prior to February 23, 2006 is not eligible for an incentive. This program is not designed to promote fuel switching.

The energy savings from installed measures must occur on a meter with an eligible rate schedule. Most non-residential rate schedules are eligible. The ineligible rate schedules are Solar 1 and 2, E-36, and some Special Contracts.

Incentive Caps

The total incentive paid cannot exceed 50 percent of the incremental measure cost. Contractor labor costs can be considered in measure costs. Customer labor costs will not be considered.

Customers with aggregated loads greater than 200 kW demand can receive up to \$300,000 per customer per program year. The estimated demand of the new building will be considered in determining the aggregated demand of the customer. All incentives paid through the APS Solutions for Business Program will be applied towards the customer incentive cap.

Please refer to the Program Policies & Procedures for further information regarding eligibility. This document can be found on the APS Solutions for Business section of the APS website: aps.com.

Pre-Notification

Submitting a Pre-Notification Application is strongly encouraged for all participants in order to reserve funding. Forgoing the pre-notification step may result in a reduced incentive amount. Customers who do not submit a Pre-Notification Application agree to abide by APS and KEMA's determination of project baselines, which will be based on conservative estimates.

KEMA will review the Pre-Notification Application for completeness of customer information. Funds will be reserved for 120 days, unless the applicant requests, and is granted, an extension. A letter acknowledging reservation of funds and the project reservation expiration date will be sent to the applicant. The program team reserves the right to contact the customer after 30 days to ensure that the project is moving forward and may cancel the commitment based on the customer's response. Funds that have been reserved are not transferable to other projects, facilities, and/or customers.

In order to be eligible, all Pre-Notification Applications should be postmarked no later than November 1, 2007, and measures should be installed by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Final Application

A Final Application is to be submitted after the project is completed. Project documentation is also required, including copies of all itemized, paid invoices and receipts detailing the specific equipment and purchases, the services provided, and other costs.

The location or business name on the invoice must be consistent with the application information. Final Applications and all required supporting documentation should be received by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

The incentive amount cannot exceed 50 percent of the incremental measure cost. The project invoice must provide sufficient detail for KEMA to separate the cost of the energy efficiency measures from the costs for other services such as repairs and building code compliance.

Terms and Conditions (2 of 2)

In cases where the contractor will receive the incentive payment directly, the submitted invoices must include the full cost of the measures and not only show the portion of the project cost that the APS customer will pay.

KEMA and APS reserve the right to request additional supporting documentation as deemed necessary to ensure measure eligibility and verify that the expected energy savings will occur. All customer information will be held in confidence.

Requested information could include: equipment purchase dates, installation dates, proof that the equipment is operational, manufacturer specifications, warranty information, and proof of customer co-payment.

KEMA and APS also reserve the right to require a commissioning report and conduct monitoring to verify energy savings before determining the final incentive payment.

Application Submittal Process

Verify that your project is eligible and meets the project requirements as set forth in the Application and the APS Solutions for Business Program Policies & Procedures. Then:

1. Submit Pre-Notification Application to the Program Team. For the Pre-Notification Application, download and complete the Program Application and check the box that says "Pre-Notification" at the top. Pre-Notification applications are requested to be submitted by November 1, 2007. Incentive funds will be reserved for 120 days or until November 30, 2007, whichever is first.*

2. Customer/Contractor installs equipment according to the terms and conditions described for the eligible measures as set forth in the APS Solutions for Business Policies & Procedures.

3. When the project is complete, submit the Final Application with all required documentation. Check the box that says "Final Application" at the top (a copy of the Pre-Notification Application can be used with changes indicated) within 60 days after project completion or by November 30, 2007, whichever comes first.*

4. KEMA will review the final project documentation and process incentives within 4 to 6 weeks after approval of the Final Application.

*Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Application Review Process

KEMA will review all applications for completeness of customer information and energy savings methodology. Completed applications will be reviewed in the order received. Funds will not be reserved for the project until the team receives a complete application and determines that the project meets the program eligibility requirements as set forth in the Policies & Procedures. Applicants who submit incomplete applications will be notified of deficiencies, but will lose their place in line in the review process until all requested information is received.

Inspections: The program team reserves the right to inspect all projects to verify compliance with the program rules and project documentation. This may include post-installation inspections, detailed lighting layout descriptions, metering, data collection, interviews, and utility bill data analyses. The customer must allow access to records and installation sites for a period of 3 years after receipt of incentive payment.

APS Solutions for Business
428 E. Thunderbird Road #749
Phoenix, AZ 85022

Tel: 1-866-277-5605

Fax: 1-866-277-5604

Email: APS.solutionsforbusiness@kema.com

All official program updates will be posted on the APS Solutions for Business section of the APS website: aps.com

Incentives are available on a first-come, first-served basis.

AGREEMENT

Tax Liability

Incentives are taxable and if greater than \$600, will be reported to the IRS unless you are exempt. KEMA will report your incentive as income to you on IRS Form 1099 unless you have indicated Corporation or Exempt tax status on the Applicant Information page of the application. Pinnacle West Capital Corporation, Arizona Public Service Company (APS) also known as "the utility," and KEMA are not responsible for any taxes that may be imposed on your business as a result of your receipt of this incentive.

Agreement

As an eligible APS customer, I certify that I contracted for or purchased and installed the indicated energy efficiency measures after February 23, 2006, for use in my business facility and not for resale. I have attached documentation establishing proof of payment for the items installed according to this application. I agree to verification by the utility, KEMA, or their representatives of both sales transactions and equipment installation.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number is representative of the applicant. I understand that incentive payments assume related energy benefits over a period of 5 years or for the life of the product.

I agree that if: (1) I do not install the DSM related product(s) identified in my application, or (2) I remove the DSM related product(s) identified in my application before the end of the life of the product or within a period of 5 years from receipt of the incentive, whichever is less; then I shall rebate a prorated amount of incentive funds to APS based on the actual period of time in which the DSM related product(s) were installed and operating (or the full amount if the DSM product was never installed). This is necessary to assure that the DSM project's related energy benefits will be achieved.

I understand that the program may be modified or terminated without prior notice.

I understand that this application and the paid itemized invoice must be received by KEMA within 60 days of installation of energy efficiency measures. All equipment must be purchased and installed prior to submitting the Final Application.

I understand that this project must involve a capital improvement that results in improved energy efficiency. I also understand that all materials removed, including lamps and PCB ballasts, must be disposed of properly.

In no case will APS pay more than 50 percent of the incremental measure costs of the project. I understand that the utility, KEMA or their representatives have the right to ask for additional information on project costs, in order to document incremental costs. The utility and KEMA will make the final determination of incentive levels for this project.

The program has a limited budget. Applications will be processed on a first-come, first-served basis until allocated funds are spent. Pre-Notification Applications are due by November 1, 2007 and Final Applications are due by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

I have read and understand the program requirements and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

Customer Signature

Project Completion Date

Third Party Signature
(Required only if receiving check)

Print Name

Total Project Cost

Print Name

Date

Total Incentive Requested

Customer Initials
(Initial here only if requesting the
check be issued to a third party)

Custom NewCon 11-01-06

Please print out, sign, and return to KEMA.

For Final Applications, sign and submit only after all equipment has been installed.

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APS has contracted with KEMA to implement this program. KEMA has provided energy-efficiency implementation services for over 30 years.

Solutions for Business

Application for Prescriptive Measures

New Construction Projects

How to Participate

1. Submit a Pre-Notification Application to reserve funding. (Optional, but strongly recommended.)
2. Install the qualified technology.
3. Complete, sign, and submit a Final Application with appropriate documentation.
4. The incentive check will be sent within 4 to 6 weeks upon approval of the Final Application.



APS Solutions for Business

Prescriptive Measures - New Construction

For Office Use Only
APR 2008

Pre-Notification

Check one: Submission Date:
☐ ☐

Final Application

☐ ☐

Customer Information

Name of Project				Business Type: (Please check one) Office <input type="checkbox"/> K-12 School <input type="checkbox"/> College/University <input type="checkbox"/> Retail <input type="checkbox"/> Restaurant <input type="checkbox"/> Hotel/Motel <input type="checkbox"/> Medical <input type="checkbox"/> Grocery <input type="checkbox"/> Warehouse <input type="checkbox"/> Process Industrial <input type="checkbox"/> Other Industrial <input type="checkbox"/> Miscellaneous <input checked="" type="checkbox"/>
Name of Organization (Project Owner)				
Project Developer (if different than Owner)				
Name of Primary Contact Person		Title		
Telephone Number		Fax #		
Email Address				
Address Where Measures Installed				
City, State, Zip (Measures Installed)				
Mailing Address of Contact Person				
City, State, Zip (Mailing Address)				
APS Account Number (Where available)		Est. Square Footage		
Taxpayer ID Number		Tax Status (Individual, Partnership, Corp, Exempt)		

Contractor Information

Company Name			
Contact Person		Contractor Phone #	
Mailing Address			
Email Address			

Incentive Check Information

Issue Incentive Check to: (check only one)	<input type="checkbox"/> Send to Customer listed above.	<input type="checkbox"/> I request that the incentive check be issued to the third party indicated below.
Customer Signature (Required if requesting that third party receive check)		
Name of Third Party (Organization receiving check)		
Name of Contact Person at Third Party		Title
Third Party Mailing Address		
Third Party City, State, Zip		
Third Party Telephone		Third Party Fax #
Third Party Email Address		
Third Party Taxpayer ID Number		Tax Status (Individual, Partnership, Corp, Exempt)

Prescriptive Lighting Incentive Worksheet

New Construction

Equipment Type	Incentive/ Unit	Number of Units	Incentive Subtotal
----------------	--------------------	--------------------	--------------------

Premium T8 and electronic ballast		Lamps	
2-foot premium T8	\$1.50		
3-foot premium T8	\$1.50		
4-foot premium T8	\$1.50		

T5 High Output Electronic Ballast		Fixtures	
T5 HO Fixture	\$75.00		

Exit Signs (LED or Electroluminescent)		Signs	
Double or Single Face	\$25.00		

Sensors and Daylighting Controls		# of Sensors	Connected Watts	
Occupancy Sensors	\$0.12			
Daylighting Controls	\$0.12			

Compact Fluorescent Lamps			
Lamp Size (Watts)	Incentive/ Lamp	Number of Lamps	Incentive Subtotal
	\$1.75		
	\$1.75		
	\$1.75		
	\$1.75		
	\$1.75		
	\$1.75		

Project Completion Date

Lighting Total	
-----------------------	--

Incentives cannot exceed 75% of incremental measure cost.

Specifications for Lighting Measures

Premium T8 Lamps and Ballasts

This measure consists of installing new fixtures with premium T8 lamps and electronic ballasts. The electronic ballast must have a ballast factor ≤ 0.78 or the fixture must have a mean lumens per Watt ≥ 90 . In addition, the new T8 lamps must have a color rendering index (CRI) ≥ 81 . The electronic ballast must be high frequency (≥ 20 kHz), UL listed, and warranted against defects for 5 years. Ballasts must have a power factor (PF) ≥ 0.90 . Ballasts for 4-foot lamps must have total harmonic discharge (THD) $\leq 20\%$ at full light output. For 2- and 3-foot lamps, ballasts must have THD $\leq 32\%$ at full light output. Eight-foot T8 lamps are not eligible for this prescriptive incentive. A manufacturer's specification sheet must accompany the application.

New T5 HO Fixtures

This incentive applies to new fixtures with at least four T5 high output (HO - 54W) lamps and electronic ballasts. All fixtures must have a reflector with a minimum of 90% reflectivity.

Exit Signs

Electroluminescent and light-emitting diode (LED) exit signs are eligible under this measure. Non-electrified and remote exit signs are not eligible. All new exit signs must be UL or ETL listed, have a minimum lifetime of 10 years, and have an input wattage ≤ 5 Watts.

Occupancy Sensors (Wall Box and Ceiling Mount)

Only passive infrared and/or ultrasonic detectors are eligible. Wall box and wall- or ceiling-mounted sensors must be hardwired and control interior lighting fixtures.

Daylighting Controls

Eligible controls shall consist of a photosensor that controls dimming ballasts. Dimming can be continuous or stepped at four or more levels (including on/off). Systems that allow on/off overrides are not eligible. A manufacturer's specification sheet must accompany the application.

Compact Fluorescent Lamps

This incentive applies to screw-in or hardwired compact fluorescent lamps (CFLs). All screw-in CFLs must be ENERGY STAR®-rated. Any lamp receiving a retail buy-down by APS is not eligible. The lamp/ballast combination must have an efficacy ≥ 40 lumens per Watt (LPW). For screw-in CFLs, electronic ballasts are required for lamps ≥ 18 Watt. For hardwired CFLs, only complete new fixtures qualify. The CFL ballast must be programmed start or programmed rapid start with a PF ≥ 90 and THD $\leq 20\%$.

Cooling Incentive Worksheet

Equipment Type	Size Category	Qualifying Efficiency *	Equipment Incentive (per ton)	Efficiency Incentive (per unit Eff. Over Qual. Eff. Per ton)
AC Units	≤5 Tons	11.6 IPLV	\$50.00	\$30.00
	>5 Tons ≤10 Tons	11.4 IPLV	\$50.00	\$30.00
	>10 Tons	11.2 IPLV	\$25.00	\$30.00
Water-Cooled Chillers	≤200 Tons	0.74 kW/Ton - IPLV	\$7.00	\$200.00
	201 - 400 Tons	0.67 kW/Ton - IPLV	\$7.00	\$200.00
	>400 Tons	0.54 kW/Ton - IPLV	\$6.00	\$200.00
Air-Cooled Chillers	<150 Tons	1.25 kW/Ton - IPLV	\$5.00	\$150.00
	≥150 Tons	1.25 kW/Ton - IPLV	\$10.00	\$150.00
			per unit	
Programmable Thermostats	NA	NA	\$50.00	per thermostat

*IPLV = Integrated Part Load Value, EER = Energy Efficiency Ratio
Specification sheets must accompany final application.

AC Units

Make and Model	Quantity	Size of Unit (tons)	Unit Efficiency (IPLV)	Qualifying Efficiency (IPLV)	Subtotal

Water-Cooled Chillers

Make and Model	Quantity	Size of Unit (tons)	Unit Efficiency (kW/Ton - IPLV)	Qualifying Efficiency (kW/Ton - IPLV)	Subtotal

Air-Cooled Chillers

Make and Model	Quantity	Size of Unit (tons)	Unit Efficiency (kW/Ton - IPLV)	Qualifying Efficiency (kW/Ton - IPLV)	Subtotal

Programmable Thermostats

Make and Model	Quantity	Square Footage of Controlled Area (if known)	Subtotal
		ft ²	

Project Completion Date

Cooling Total

Incentives cannot exceed 75% of incremental measure cost.

Specifications for Cooling Measures

Water- and Air-Cooled Air Conditioning

New air conditioning units or heat pumps that meet or exceed the qualifying Integrated Part Load Value (IPLV) shown in the Cooling Incentive Worksheet Table are eligible for an incentive. These units can be either air-cooled or water-cooled. They can be either split systems or single packaged units. Evaporative coolers and water source heat pumps do not qualify under this program, but may qualify under the Custom Incentive Program. All packaged and split system cooling equipment must meet Air-Conditioning and Refrigeration Institute (ARI) standards (210/240, 320 or 340/360), be UL listed, use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). A manufacturer's specification sheet indicating the system IPLV must accompany the application.

Water- and Air-cooled Chillers

Chillers that have a rated kW/ton for the Integrated Part Load Value (IPLV) conditions that is less than or equal to the qualifying efficiency shown in the Cooling Incentive Worksheet Table are eligible for an incentive. The chiller efficiency rating must be based on ARI Standard 550-98 for IPLV conditions and not based on full-load conditions. The chillers must meet ARI standards 550-98, be UL listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). The ARI net capacity value should be used to determine the chiller tons. A manufacturer specification/performance sheet with the rated kW/Ton-IPLV or COP-IPLV must accompany the application.

Incentive Calculations for Air Conditioners and Chillers

The total incentive is determined by two components – an equipment incentive and an efficiency incentive. Both the equipment and efficiency incentives are applied per ton of cooling installed. The equipment qualifies for an equipment incentive if the qualifying efficiency is met for the equipment size category. In addition, the efficiency incentive is added on a prorated basis if the equipment exceeds the minimum qualifying efficiency for the equipment size category.

The incentive for air conditioners is calculated as follows:

$$\text{Tons} \times \left[[\text{Equipment Incentive/ton} + [\text{Efficiency Incentive/ton} \times (\text{IPLV}_{\text{new}} - \text{IPLV}_{\text{qualifying}})] \right]$$

The incentive for chillers is calculated as follows:

$$\text{Tons} \times \left[\text{Equipment Incentive/ton} + [\text{Efficiency Incentive/ton} \times (\text{kW/ton}_{\text{qualifying}} - \text{kW/ton}_{\text{new}})] \right]$$

Programmable Thermostats

ENERGY STAR®-labeled programmable thermostats that automatically adjust the temperature at pre-selected times are required. To meet ENERGY STAR® standards, they must be capable of maintaining two separate programs (to address the different comfort needs of weekdays and weekends) and up to four temperature settings for each program. A manufacturer's specification sheet must accompany the application.

HVAC Quality Installation Incentive Worksheet

	Number of Units	Total Tons	Total Cost	Incentive Cap	Incentive 75% of cost (not to exceed cap)
Quality Installation - Phase I				\$180 per unit	
Quality Installation - Phase II - Duct Seal				\$225 per unit + \$15/ton	
Project Completion Date					
				Quality Installation Total	

Quality Installation

Quality Installation is performed when a new HVAC system is being installed. This measure is split into two phases. Phase I consists of various sizing, testing, and repair activities. Phase II involves the sealing of ducts based on the Phase I test results. The following listing summarizes the requirements in order to receive an incentive. See Table 1 for documentation requirements.

Phase I Activities

1) System Sizing

Must use Air Conditioning Contractors Association (ACCA) standard calculations and provide documentation

- Manual N for load estimation
- Manual CS for system selection
- Manual Q for duct sizing

2) Refrigerant Charge and Air Flow (RCAF)

a) Perform RCAF Testing -

(See HVAC Services Supplement for measurement procedures and target flow tables)

b) Correction of refrigerant charge and/or air flow until the criteria in Table 2 are met

3) Duct Leakage Testing - (See HVAC Services Supplement for measurement procedures)

Phase II - Duct Sealing Activities

Only perform Phase II Duct Sealing if leakage is > 25 CFM per ton.

1) Seal ducts until leakage is below 25 CFM per ton. Leakage of up to 60 CFM per ton is allowed for major renovation projects where the ducts were not replaced.

(See HVAC Services Supplement for approved sealing materials).

2) Measure duct leakage after sealing to verify that required leakage targets were met.

Table 1 - Documentation Requirements

Provide the following information for each system
Equipment Sizing Calculations
System Size (tons)
Nameplate IPLV or EER
Nameplate Refrigerant Quantity
Target and actual superheat or subcool temps from all tests
Amount of refrigerant added or removed
Target and actual for supply/return temperature differentials from all tests
Air flow CFM from all tests
Duct leakage CFM from all tests

Table 2 - RCAF Targets

System Type	Criteria
For Fixed Orifice Systems	+/- 5°F of target superheat temp
For Systems with TXV	+/- 3°F of target subcool temp
All	Air flow greater than 400 cfm per ton or +/- 3°F of target temp differential

Refrigeration Incentive Worksheet

Refrigeration Measures				
Measure	Incentive Unit	Qty	Incentive/Unit	Subtotal
Strip Curtains on Walk-Ins	Per Linear Foot (door width)		\$5.00	
Night Covers	Per Linear Foot		\$10.00	
Reach-in Cooler Controls	Reach-in Cooler		\$100.00	

Anti-Sweat Heater Controls					
Make/Model	Type (no Multi-Deck)	Number of Sensors	Case Length (LF)	Incentive per Sensor	
				\$200.00	
				\$200.00	
				\$200.00	

High-Efficiency Ice Makers					
Make/Model	Air or Water Cooled	Quantity	Size (lbs / 24 hrs)	Incentive per Ice Maker	
				\$45.00	
				\$45.00	
				\$45.00	

High-Efficiency Refrigerators or Freezers					
Make/Model	Freezer or Refrigerator	Quantity	Number of Doors	Incentive per Unit	
				\$75.00	
				\$75.00	
				\$75.00	

High-Efficiency Evaporator Fan Motors					
Make/Model	PSC or EC Motor	Quantity	Motor HP	Incentive per Unit	
				\$10.00	
				\$10.00	
				\$10.00	

Vending Machine Controls				
Make/Model	Unit	Quantity	Incentive per Unit	
Beverage Machine Controls	Vending Machine		\$100.00	
Snack Machine Controls	Vending Machine		\$25.00	

Project Completion Date

Refrigeration Total	
---------------------	--

Incentives cannot exceed 75% of incremental measure cost.

Specifications for Refrigeration Measures

Strip Curtains on Walk-ins

New strip curtains or clear plastic swinging doors must be installed on doorways of walk-in boxes and refrigerated warehouses. This incentive is not available for display cases. Incentive is based on linear foot of door width.

Night Covers

This measure consists of installing a cover on an otherwise open vertical or horizontal refrigerated case to decrease cooling load. It is recommended that these films have small, perforated holes to decrease moisture buildup. Customers should also consider using proper compressor capacity modulation mechanisms (such as VSDs or an unloader). The incentive amount is based on the length of the case.

Reach-in Cooler Controls

The reach-in cooler is assumed to be a refrigerated unit that contains only non-perishable bottled and canned beverages. The controller must include a passive infrared occupancy sensor to turn off fluorescent lights and other refrigerated systems when the surrounding area is unoccupied for 15 minutes or longer. The control logic should power up the machine at 2-hour intervals to maintain product temperature.

Anti-Sweat Heater Controls

For this measure, a device is installed that senses the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation (on the inner glass pane) also qualify.

High-efficiency Ice makers

Ice makers that are eligible can be air cooled or water cooled and have a minimum capacity of 101 lbs of ice per 24-hour period. The minimum efficiency required is per the Federal Energy Management Program guidelines at:

http://www.eere.energy.gov/femp/procurement/eep_ice_makers.cfm
A manufacturer's specification sheet must accompany the application.

High-efficiency Reach-in Refrigerators and Freezers

This measure involves installation of ENERGY STAR®-rated high-efficiency supermarket reach-in refrigerated cases, which includes one-door, two-door, and three-door refrigerators and freezers. All one-door units have a capacity of ≤30 cubic feet; two-door units are ≤60 cubic feet; and three-door units are ≤90 cubic feet. ENERGY STAR®-labeled commercial solid door refrigerators and freezers are designed with components such as electronically commutated motor (ECM) evaporators and condenser fan motors, hot gas anti-sweat heaters, or high-efficiency compressors. A manufacturer's specification sheet must accompany the application.

Evaporative Fan Motor

This measure is applicable to the specification and purchase of either a ECM or permanent split-capacitor (PSC) motor in place of a standard-efficiency shaded-pole evaporator fan motor in refrigerated display cases or fan coil in walk-ins.

Vending Machine Controls: Beverage and Snack

The beverage machine is assumed to be a refrigerated vending machine that contains only non-perishable bottled and canned beverages. Controller for both types of systems must include a passive infrared occupancy sensor to turn off fluorescent lights and other vending machine systems when the surrounding area is unoccupied for 15 minutes or longer. For the beverage machine, the control logic should power up the machine at 2-hour intervals to maintain product temperature.

Motors Incentive Worksheet

Premium-Efficiency Motors - Minimum Qualifying Efficiencies							
Horse Power	3600 RPM		1800 RPM		1200 RPM		Incentive/HP
	Open	Closed	Open	Closed	Open	Closed	
1	77.6%	77.6%	85.7%	85.0%	82.2%	85.5%	\$10.00
1.5	85.4%	85.1%	86.9%	87.2%	86.2%	N/A	\$7.00
2	86.7%	86.1%	87.5%	87.4%	87.1%	88.1%	\$6.00
3	86.1%	87.6%	89.8%	89.7%	89.3%	90.2%	\$6.00
5	88.5%	89.5%	90.4%	90.2%	90.1%	90.0%	\$6.00
7.5	89.7%	90.5%	91.7%	91.5%	91.5%	91.7%	\$5.00
10	90.4%	91.7%	92.0%	91.8%	92.0%	92.0%	\$4.00
15	91.1%	91.8%	93.2%	92.7%	92.7%	92.5%	\$3.00
20	91.8%	92.1%	93.3%	93.3%	92.9%	92.5%	\$2.50
25	92.9%	92.9%	94.0%	93.8%	93.7%	93.4%	\$2.50
30	93.3%	92.7%	94.0%	93.9%	94.0%	93.7%	\$2.50
40	93.6%	93.4%	94.5%	94.6%	94.5%	94.3%	\$2.50
50	93.7%	93.9%	94.9%	94.9%	94.6%	94.4%	\$2.25
60	94.3%	94.3%	95.6%	95.2%	95.1%	94.9%	\$2.00
75	94.4%	94.5%	95.3%	95.4%	95.3%	94.9%	\$1.75
100	94.6%	94.8%	95.9%	95.5%	95.5%	95.4%	\$1.50
125	94.7%	95.2%	95.9%	95.4%	95.7%	95.5%	\$1.50
150	94.8%	95.5%	96.1%	95.8%	95.9%	95.9%	\$1.50
> 150	95.1%	95.7%	96.2%	96.3%	96.0%	95.8%	\$1.50

Efficiency standards are for all motors less than or equal to the indicated horsepower (up to the lower sized motor). For example, for a 4 HP motor, use the efficiency standard for a 5 HP motor. For motors less than 1 HP, use values for 1 HP.

Motor Description (Make/Model) Enter X under speed and type	Qty	Motor Size (HP)	3600 RPM	1800 RPM	1200 RPM	Open	Closed	Enter Actual Motor Eff.	Req'd Motor Eff.	Incentive \$/HP	Subtotal

Motors Total

Variable-Speed Drives

Incentive per horsepower (all sizes) \$50

VSD Description	Quantity	VSD Size (HP)	Incentive Amount	Subtotal

Project Completion Date

VSD Total

Incentives cannot exceed 75% of incremental measure cost.

Motors & VSD Total

Specifications for Motor Measures

Motor Measures

Motors eligible for an incentive are three-phase induction motors of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Incentives are based on the motor's Nominal Full Load Efficiencies that meet or exceed the efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching water or air flows (GPM, CFM) to the designed pump or fan flows when installing energy efficient motors that inherently have higher speeds (less slip), which may increase energy savings.

Variable-Speed Drives

Variable-speed drive (VSD) applications are available for this incentive, except for installing a VSD on a new chiller. New chillers with integrated VSDs are eligible under the chiller incentive. The VSD installation must result in energy savings. No other throttling devices such as inlet vanes, bypass dampers, and throttling valves should be used on the system. A 3% impedance choke is recommended to handle any power factor corrections that may occur. VSDs are sensitive to overvoltage.

Terms and Conditions (1 of 2)

Introduction

Arizona Public Service Company (APS) is offering prescriptive incentives under the APS Solutions for Business Program to facilitate the implementation of cost-effective energy-efficiency improvements. KEMA is implementing this program for APS.

Program and Project Eligibility

Prescriptive incentives for new construction and major renovation projects are available under the APS Solutions for Business Program to non-residential facilities within APS's service territory. New construction and major renovation projects must use a New Construction Application. Energy efficient equipment or services purchased, contracted for or work conducted prior to February 23, 2006 is not eligible for an incentive. The prescriptive measures included in this program are not designed to promote fuel-switching.

The energy savings from installed measures must occur on a meter with an eligible rate schedule. Most non-residential rate schedules are eligible. The ineligible rates schedules are Solar 1 and 2, E-36, and some Special Contracts.

Incentive Caps

The total incentive paid cannot exceed 75 percent of the incremental measure cost. Contractor labor costs can be considered in measure costs. Customer labor costs will not be considered.

Customers with an aggregated demand of 200 kW or less can receive up to \$150,000 per customer per program year. Customers with aggregated loads greater than 200 kW demand can receive up to \$300,000 per customer per program year. The estimated demand of the new building will be considered in determining the aggregated demand of the customer. All incentives paid through the APS Solutions for Business Program will be applied towards the customer incentive cap.

Please refer to the Program Policies & Procedures for further information regarding eligibility. This document can be found on the APS Solutions for Business section of the APS website: aps.com.

Pre-Notification

Submitting a Pre-Notification Application is strongly encouraged for all participants in order to reserve funding. Forgoing the pre-notification step may result in a reduced incentive amount.

KEMA will review the Pre-Notification application for completeness of customer information and reserve funds for 120 days unless the applicant requests, and is granted, an extension. A letter acknowledging reservation of funds and the reservation expiration date will be sent to the applicant. The program team reserves the right to contact the customer after 30 days to ensure that the project is moving forward and may cancel the commitment based on the customer's response. Funds that have been reserved are not transferable to other projects, facilities, and/or customers.

In order to be eligible, all Pre-Notification Applications should be postmarked no later than November 1, 2007, and measures should be installed by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Final Application

A Final Application is to be submitted after the project is completed. Project documentation is also required, including copies of all itemized, paid invoices and receipts detailing the specific equipment and purchases, the services provided, and other costs.

The location or business name on the invoice must be consistent with the application information. Final Applications and all required supporting documentation should be received by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

The incentive amount cannot exceed 75 percent of the incremental measure cost. The project invoice must provide sufficient detail for KEMA to separate the cost of the prescriptive measures from the cost for other services such as repairs and building code compliance.

Terms and Conditions (2 of 2)

In cases where the contractor will receive the incentive payment directly, the submitted invoices must include the full cost of the measures and not only show the portion of the project cost that the APS customer will pay.

KEMA and APS reserve the right to request additional supporting documentation as deemed necessary to ensure measure eligibility and verify that the expected energy savings will occur. All customer information will be held in confidence.

Requested information could include: equipment purchase dates, installation dates, proof that the equipment is operational, manufacturer specifications, warranty information, and proof of customer co-payment.

Application Submittal Process

Verify that your project is eligible and meets the project requirements as set forth in the Application and the APS Solutions for Business Program Policies & Procedures. Then:

1. Submit the Pre-Notification Application to the Program Team. For the Pre-Notification Application, download and complete the Program Application and check the box that says "Pre-Notification" at the top. Pre-Notification Applications are requested to be submitted by November 1, 2007. Incentive funds will be reserved for 120 days, or until November 30, 2007, whichever is first.*
2. Customer/Contractor installs equipment according to the terms and conditions described for the eligible measures as set forth in the APS Solutions for Business Policies & Procedures.
3. When the project is complete, submit the Final Application with all required documentation. Check the box that says "Final Application" at the top (a copy of the Pre-Notification Application can be used with changes indicated) within 60 days after project completion or by November 30, 2007, whichever comes first.*
4. KEMA will review the final project documentation and process incentives within 4 to 6 weeks after approval of the Final Application.

*Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Application Review Process

KEMA will review final applications for eligibility and completeness. Completed applications will be reviewed in the order received. Incentives will not be paid until the team receives a complete application and determines that the project meets the program eligibility requirements as set forth in the Policies & Procedures. Applicants who submit incomplete applications will be notified of deficiencies, but will lose their place in line in the review process until all requested information is received.

Inspections: The program team reserves the right to inspect all projects to verify compliance with the program rules and verify the accuracy of project documentation. The customer must allow access to records and installation sites for a period of 3 years after receipt of incentive payment.

APS Solutions for Business
428 E. Thunderbird Road #749
Phoenix, AZ 85022

Tel: 1-866-277-5605

Fax: 1-866-277-5604

Email: APS.solutionsforbusiness@kema.com

All official program updates will be posted on the APS Solutions for Business section of the APS website: aps.com

Incentives are available on a first-come, first-served basis.

AGREEMENT

Tax Liability

Incentives are taxable and if greater than \$600, will be reported to the IRS unless you are exempt. KEMA will report your incentive as income to you on IRS Form 1099 unless you have indicated Corporation or Exempt tax status on the Applicant Information page of the application. Pinnacle West Capital Corporation, Arizona Public Service Company (APS) also known as "the utility," and KEMA are not responsible for any taxes that may be imposed on your business as a result of your receipt of this incentive.

Agreement

As an eligible APS customer, I certify that I contracted for or purchased and installed the indicated energy efficiency measures after February 23, 2006 for use in my business facility and not for resale. I have attached documentation establishing proof of payment for the items installed according to this application. I agree to verification by the utility, KEMA, or their representatives of both sales transactions and equipment installation.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number is representative of the applicant. I understand that incentive payments assume related energy benefits over a period of 5 years or for the life of the product.

I agree that if: (1) I do not install the DSM related product(s) identified in my application, or (2) I remove the DSM related product(s) identified in my application before the end of the life of the product or within a period of 5 years from receipt of the incentive, whichever is less; then I shall rebate a prorated amount of incentive funds to APS based on the actual period of time in which the DSM related product(s) were installed and operating (or the full amount if the DSM product was never installed). This is necessary to assure that the DSM project's related energy benefits will be achieved.

I understand that the program may be modified or terminated without prior notice.

I understand that this application and the paid itemized invoice must be received by KEMA within 60 days of installation of energy efficiency measures. All equipment must be purchased and installed prior to submitting the Final Application.

I understand that this project must involve a capital improvement that results in improved energy efficiency over a base design. I also understand that all materials removed, including lamps and PCB ballasts, must be disposed of properly.

In no case will APS pay more than 75 percent of the incremental measure costs of the project. I understand that the utility, KEMA or their representatives have the right to ask for additional information on project costs, in order to document incremental costs. The utility and KEMA will make the final determination of incentive levels for this project.

The program has a limited budget. Applications will be processed on a first-come, first-served basis until allocated funds are spent. Pre-Notification Applications are requested to be submitted by November 1, 2007 and Final Applications are requested to be submitted by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

I have read and understand the program requirements and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

Customer Signature

Project Completion Date

Third Party Signature
(Required only if receiving check)

Print Name

Total Project Cost

Print Name

Date

Total Incentive Requested

Customer Initials
(Initial here only if requesting the
check be issued to a third party)

Please print out, sign, and return to KEMA.

For Final Applications, sign and submit only after all equipment has been installed.

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KEMA 

APS has contracted with KEMA to implement this program. KEMA has provided energy-efficiency implementation services for over 30 years.

Solutions for Business

Application for Custom Measures

Retrofit Projects

How to Participate

1. Submit a Pre-Notification Application to reserve funding. (Optional, but strongly recommended.)
2. Install the qualified technology.
3. Complete, sign, and submit a Final Application with appropriate documentation.
4. The incentive check will be sent within 4 to 6 weeks upon approval of the Final Application.



APS Solutions for Business

Custom Measures - Retrofit

For Office Use Only
APR

Check one: Submission Date:

Pre-Notification ☐

Final Application ☐

Customer Information

Name of Project				Business Type: (Please check one) Office <input type="checkbox"/> K-12 School <input type="checkbox"/> College/University <input type="checkbox"/> Retail <input type="checkbox"/> Restaurant <input type="checkbox"/> Hotel/Motel <input type="checkbox"/> Medical <input type="checkbox"/> Grocery <input type="checkbox"/> Warehouse <input type="checkbox"/> Process Industrial <input type="checkbox"/> Other Industrial <input type="checkbox"/> Miscellaneous <input type="checkbox"/>
Name of Organization (Project Owner)				
Project Developer (if different than Owner)				
Name of Primary Contact Person		Title		
Telephone Number		Fax #		
Email Address				
Address Where Measures Installed				
City, State, Zip (Measures Installed)				
Mailing Address of Contact Person				
City, State, Zip (Mailing Address)				
APS Account Number (Where available)		Est. Square Footage		
Taxpayer ID Number		Tax Status (Individual, Partnership, Corp, Exempt)		

Contractor Information

Company Name			
Contact Person		Telephone #	
Mailing Address			
Email Address			

Incentive Check Information

Issue Incentive Check to: (check only one)	<input type="checkbox"/> Send to Customer listed above.	<input type="checkbox"/> I request that the incentive check be issued to the third party indicated below.
Customer Signature (Required if requesting that third party receive check)		
Name of Third Party (Organization receiving check)		
Name of Contact Person at Third Party		Title
Third Party Mailing Address		
Third Party City, State, Zip		
Third Party Telephone		Third Party Fax #
Third Party Email Address		
Third Party Taxpayer ID Number		Tax Status (Individual, Partnership, Corp, Exempt)

Custom Retrofit 11-01-05

Custom Incentive Worksheet

Please attach supporting documents as described in the specifications.

Item 1			
Description	Annual kWh Savings	\$/kWh	Subtotal
	Measure Cost	\$0.11	

Item 2			
Description	Annual kWh Savings	\$/kWh	Subtotal
	Measure Cost	\$0.11	

Item 3			
Description	Annual kWh Savings	\$/kWh	Subtotal
	Measure Cost	\$0.11	

Item 4			
Description	Annual kWh Savings	\$/kWh	Subtotal
	Measure Cost	\$0.11	

Project Completion Date

Incentives cannot exceed 50% of incremental measure cost.

Total Incentive

Specifications for Custom Measures

The incentive amount will be calculated as \$0.11 per estimated kilowatt hour saved (first year only). Actual incentive payments will be based on either (1) documented electrical energy (kWh) reduction or (2) an electrical energy reduction estimate approved by KEMA. Under no circumstances will the incentive payment exceed 50 percent of the energy-efficiency-related project costs, which are defined as the incremental costs associated with implementing the energy-saving measures.

Project Eligibility

Measures or projects not eligible for prescriptive retrofit incentives under the APS Solutions for Business Program that result in improved energy efficiency may be eligible for custom incentives. The project must have isolated and measurable or verifiable energy savings. Projects replacing inefficient equipment with more efficient equipment must demonstrate that the old equipment has been eliminated from the resale market. All custom measures must pass a Total Resource Cost (TRC) Test, as defined and calculated by KEMA, using energy savings and measure costs provided by the customer. For more information on the TRC, see the APS Solutions for Business Program Policy and Procedures Manual. Ineligible projects include (but are not limited to) cool roofs, electrical generation projects including renewables, fuel switching, and customer-owned on-site generation.

Supporting Documentation

In addition to required documentation as described in the APS Solutions for Business Program Policies & Procedures, please attach supporting documentation, including (but not limited to) the following:

- Complete description of the proposed project, the products and technologies used, and how they will be employed. Include definitions of the base case and details of the proposed equipment (provide manufacturer's specification sheets for both base and proposed cases, if possible).
- All facilities, buildings or equipment that will be affected by the project; include all APS account numbers.
- Detail cost breakdown by measure.

Savings Calculations

Include all relevant data that will allow an engineer to duplicate the savings estimate provided, such as:

- Concise description of the existing energy systems to be affected
- Facility physical description and occupancy (including activities in building and hours of operation)
- Location of affected equipment
- Condition and age of equipment if a degradation in nameplate efficiency is assumed
- Hours of operation of the affected equipment
- Number of existing units
- Ratings of equipment (wattage, nameplate, tonnage, voltage, etc.)
- Measure-by-measure summary of the calculated savings associated with the project
- Historical peak power (if demand metered) and/or energy consumption data
- Clearly indicate all assumptions and variables used in the analysis
- Describe the basis or rationale for each assumption and variable.

It is up to the applicant to present a convincing case for how energy savings should be estimated. If it is unclear if your preferred method is sufficient, contact us at 866-277-5605. The customer may be eligible for an incentive for feasibility or retrocommissioning studies. See an Application for Technical Assistance & Studies for details.

Energy Savings Analysis

Inspections and all submitted documentation of pre-existing conditions will be reviewed to determine project eligibility and to estimate the base case energy usage. Applicants will be responsible for submitting complete documentation that indicates the basis for projected energy savings. We reserve the right to require pre and/or post measurement and verification for any project. Customers agree to abide by APS and KEMA's determination of project baselines, which will be based on conservative estimates in absence of verifiable data. Cases where a baseline energy use cannot be estimated may be disqualified. Energy savings from measures eligible for prescriptive incentives and their costs will not be considered when determining the amount of custom incentive.

Terms and Conditions (1 of 2)

Introduction

Arizona Public Service Company (APS) is offering custom incentives under the APS Solutions for Business Program to facilitate the implementation of cost-effective energy efficiency improvements. KEMA is implementing this program for APS.

Program and Project Eligibility

Custom incentives for retrofit projects are available under the APS Solutions for Business Program to non-residential customers within APS's service territory that have a maximum aggregated monthly demand of 200 kW or greater in the past 12 months. These incentives are designed to cover energy savings measures not covered under the prescriptive incentives for retrofit projects. New construction and major renovation projects should use a New Construction Application. Energy efficient equipment or services purchased, contracted for or work conducted prior to February 23, 2006 is not eligible for an incentive.

The energy savings from installed measures must occur on a meter with an eligible rate schedule. Most non-residential rate schedules are eligible. The ineligible rate schedules are Solar 1 and 2, E-36, and some Special Contracts.

Incentive Caps

The total incentive paid cannot exceed 50 percent of the incremental measure cost. Contractor labor costs can be considered in measure costs. Customer labor costs will not be considered.

Customers with aggregated loads greater than 200 kW demand can receive up to \$300,000 per customer per program year. All incentives paid through the APS Solutions for Business Program will be applied towards the customer incentive cap.

Please refer to the Program Policies & Procedures for further information regarding eligibility. This document can be found on the APS Solutions for Business Program section of the APS website: aps.com.

Pre-Notification

Submitting a Pre-Notification Application is strongly encouraged for all participants in order to reserve funding. Forgoing the pre-notification step may result in a reduced incentive amount. Customers who do not submit a Pre-Notification Application agree to abide by APS and KEMA's determination of project baselines, which will be based on conservative estimates. Cases where a baseline cannot be estimated will be disqualified.

KEMA will review the Pre-Notification Application for completeness of customer information. Funds will be reserved for 120 days, unless the applicant requests, and is granted an extension. A letter acknowledging reservation of funds and the reservation expiration date will be sent to the applicant. The program team reserves the right to contact the customer after 30 days to ensure that the project is moving forward and may cancel the commitment based on the customer's response. Funds that have been reserved are not transferable to other projects, facilities, and/or customers.

In order to be eligible, all Pre-Notification Applications should be postmarked no later than November 1, 2007, and measures should be installed by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Final Application

A Final Application is to be submitted after the project is completed. Project documentation is also required, including copies of all itemized, paid invoices and receipts detailing the specific equipment and purchases, the services provided, and other costs.

The location or business name on the invoice must be consistent with the application information. Final Applications and all required supporting documentation should be received by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

The incentive amount cannot exceed 50 percent of the incremental measure cost. The project invoice must provide sufficient detail for KEMA to separate the cost of the energy efficiency measures from the costs for other services such as repairs and building code compliance.

Terms and Conditions (2 of 2)

In cases where the contractor will receive the incentive payment directly, the submitted invoices must include the full cost of the measures and not only show the portion of the project cost that the APS customer will pay.

KEMA and APS reserve the right to request additional supporting documentation as deemed necessary to ensure measure eligibility and verify that the expected energy savings will occur. All customer information will be held in confidence.

Requested information could include: equipment purchase dates, installation dates, proof that the equipment is operational, manufacturer specifications, warranty information, and proof of customer co-payment.

KEMA and APS also reserve the right to require a commissioning report and conduct monitoring to verify energy savings before determining the final incentive payment.

Application Submittal Process

Verify that your project is eligible and meets the project requirements as set forth in the Application and the APS Solutions for Business Policies & Procedures. Then:

1. Submit Pre-Notification Application to the Program Team. For the Pre-Notification Application, download and complete the Program Application and check the box that says "Pre-Notification" at the top. Pre-Notification applications are requested to be submitted by November 1, 2007. Incentive funds will be reserved for 120 days or until November 30, 2007, whichever is first.*

2. Customer/Contractor installs equipment according to the terms and conditions described for the eligible measures as set forth in the APS Solutions for Business Program Policies & Procedures.

3. When the project is complete, submit the Final Application with all required documentation. Check the box that says "Final Application" at the top (a copy of the Pre-Notification Application can be used with changes indicated) within 60 days after project completion or by November 30, 2007, whichever comes first.*

4. KEMA will review the final project documentation and process incentives within 4 to 6 weeks after approval of the Final Application.

*Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Application Review Process

KEMA will review all applications for eligibility and completeness of customer information. Completed applications will be reviewed in the order received. Funds will not be reserved for the project until the team receives a complete application and determines that the project meets the program eligibility requirements as set forth in the Policies & Procedures. Applicants who submit incomplete applications will be notified of deficiencies, but will lose their place in line in the review process until all requested information is received.

Inspections: The program team reserves the right to inspect all projects to verify compliance with the program rules and project documentation. This may include pre-installation and/or post-installation inspections, detailed lighting layout descriptions, metering, data collection, interviews, and utility bill data analyses. The customer must allow access to records and installation sites for a period of 3 years after receipt of incentive payment.

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428 E. Thunderbird Road #749
Phoenix, AZ 85022

Tel: 1-866-277-5605

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Email: APS.solutionsforbusiness@kema.com

All official program updates will be posted on the APS Solutions for Business section of the APS website: aps.com

Incentives are available on a first-come, first-served basis.

AGREEMENT

Tax Liability

Incentives are taxable and if greater than \$600, will be reported to the IRS unless you are exempt. KEMA will report your incentive as income to you on IRS Form 1099 unless you have indicated Corporation or Exempt tax status on the Applicant Information page of the application. Pinnacle West Capital Corporation, Arizona Public Service Company (APS) also known as "the utility," and KEMA are not responsible for any taxes that may be imposed on your business as a result of your receipt of this incentive.

Agreement

As an eligible APS customer, I certify that I contracted for or purchased and installed the indicated energy efficiency measures after February 23, 2006 for use in my business facility and not for resale. I have attached documentation establishing proof of payment for the items installed according to this application. I agree to verification by the utility, KEMA, or their representatives of both sales transactions and equipment installation.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number is representative of the applicant. I understand that incentive payments assume related energy benefits over a period of 5 years or for the life of the product.

I agree that if: (1) I do not install the DSM related product(s) identified in my application, or (2) I remove the DSM related product(s) identified in my application before the end of the life of the product or within a period of 5 years from receipt of the incentive, whichever is less; then I shall rebate a prorated amount of incentive funds to APS based on the actual period of time in which the DSM related product(s) were installed and operating (or the full amount if the DSM product was never installed). This is necessary to assure that the DSM project's related energy benefits will be achieved.

I understand that the program may be modified or terminated without prior notice.

I understand that this application and the paid itemized invoice must be received by KEMA within 60 days of installation of energy efficiency measures. All equipment must be purchased and installed prior to submitting the Final Application.

I understand that this project must involve a capital improvement that results in improved energy efficiency. I also understand that all materials removed, including lamps and PCB ballasts, must be disposed of properly.

In no case will APS pay more than 50 percent of the incremental measure costs of the project. I understand that the utility, KEMA or their representatives have the right to ask for additional information on project costs, in order to document incremental costs. The utility and KEMA will make the final determination of incentive levels for this project.

The program has a limited budget. Applications will be processed on a first-come, first-served basis until allocated funds are spent. Pre-Notification Applications are due by November 1, 2007 and Final Applications are due by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

I have read and understand the program requirements and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

Customer Signature

Project Completion Date

Third Party Signature
(Required only if receiving check)

Print Name

Total Project Cost

Print Name

Date

Total Incentive Requested

Customer Initials
(Initial here only if requesting the
check be issued to a third party)

Custom Retrofit 11-01-06

Please print out, sign, and return to KEMA.

For Final Applications, sign and submit only after all equipment has been installed.

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APS has contracted with KEMA to implement this program. KEMA has provided energy-efficiency implementation services for over 30 years.

Solutions for Business

Application for Prescriptive Measures

Retrofit Projects

How to Participate

1. Submit a Pre-Notification Application to reserve funding. (Optional, but strongly recommended for most measures. Required for de-lamping.)
2. Install the qualified technology.
3. Complete, sign, and submit a Final Application with appropriate documentation.
4. The incentive check will be sent within 4 to 6 weeks upon approval of the Final Application.



APS Solutions for Business

Prescriptive Measures - Retrofit

For Office Use Only
APR _____

Check one Submission Date: _____

Pre-Notification ☐

Final Application ☐

Customer Information

Name of Project				Business Type: (Please check one) <input type="checkbox"/> Office <input type="checkbox"/> K-12 School <input type="checkbox"/> College/University <input type="checkbox"/> Retail <input type="checkbox"/> Restaurant <input type="checkbox"/> Hotel/Motel <input type="checkbox"/> Medical <input type="checkbox"/> Grocery <input type="checkbox"/> Warehouse <input type="checkbox"/> Process Industrial <input type="checkbox"/> Other Industrial <input type="checkbox"/> Miscellaneous
Name of Organization				
Name as it appears on Your APS Bill				
Name of Contact Person at Organization		Title		
Telephone Number		Fax #		
Email Address				
Address Where Measures Installed				
City, State, Zip (Measures Installed)				
Mailing Address				
City, State, Zip (Mailing Address)				
APS Account Number		Est. Square Footage		
Taxpayer ID Number		Tax Status (Individual, Partnership, Corp, Exempt)		

Contractor Information

Company Name			
Contact Person		Contractor Phone #	
Mailing Address			
Email Address			

Incentive Check Information

Issue Incentive Check to: (check only one)	<input checked="" type="checkbox"/> Send to Customer listed above.	<input type="checkbox"/> I request that the incentive check be issued to the third party indicated below.
Customer Signature (Required if requesting that third party receive check)		
Name of Third Party (Organization receiving check)		
Name of Contact Person at Third Party		Title
Third Party Mailing Address		
Third Party City, State, Zip		
Third Party Telephone		Third Party Fax #
Third Party Email Address		
Third Party Taxpayer ID Number		Tax Status (Individual, Partnership, Corp, Exempt)

Lighting Incentive Worksheet

Equipment Type	Incentive/ Unit	Replacing	Number of Units	Incentive Subtotal
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T8/T5 and electronic ballast			Lamps	
2-foot T8/T5	\$5.00	T12 Lamps		
3-foot T8/T5	\$5.00	T12 Lamps		
4-foot T8/T5	\$5.00	T12 Lamps		

Premium T8 and electronic ballast			Lamps	
2-foot premium T8	\$8.00	T12 Lamps		
3-foot premium T8	\$8.00	T12 Lamps		
4-foot premium T8	\$8.00	T12 Lamps		

Delamping <i>Pre-Notification application and pre-inspection are required</i>			Lamps Removed	
Remove 2-foot lamp	\$2.50	NA		
Remove 3-foot lamp	\$2.50	NA		
Remove 4-foot lamp	\$2.50	NA		
Remove 8-foot lamp	\$5.00	NA		

T5 High Output Electronic Ballast			Fixtures	
T5 HO Fixture	\$75.00	400+ Watt fixture		

Exit Signs (LED or Electroluminescent)			Signs	
Double or Single Face	\$25.00	Incandescent		
Double or Single Face	\$25.00	CFL		

Sensors and Daylighting Controls	# of Sensors	Connected Watts	
Occupancy Sensors	\$0.12		
Daylighting Controls	\$0.12		

Compact Fluorescent Lamps				
Lamp Size (Watts)	Incentive/ Lamp	Screw-in (S) or Hardwired (H)	Number of Lamps	Incentive Subtotal
	\$1.75			
	\$1.75			
	\$1.75			
	\$1.75			
	\$1.75			
	\$1.75			

Project Completion Date

Lighting Total	
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Incentives cannot exceed 75% of incremental measure cost.

Specifications for Lighting Measures

Linear Fluorescent T8 or T5 Lamps with Electronic Ballasts

This measure consists of replacing existing T12 lamps and magnetic ballasts with T5 or T8 lamps and electronic ballasts. The new T8/T5 lamps must have a color rendering index (CRI) ≥ 80 . The electronic ballast must be high frequency (≥ 20 kHz), UL listed, and warranted against defects for 5 years. Ballasts must have a power factor (PF) ≥ 0.90 . Ballasts for 4-foot lamps must have total harmonic discharge (THD) $\leq 20\%$ at full light output. For 2- and 3-foot lamps, ballasts must have THD $\leq 32\%$ at full light output. Eight-foot T8 lamps are not eligible for this prescriptive incentive.

Premium T8 Lamps and Ballasts

This measure consists of replacing existing T12 lamps and magnetic ballasts with premium T8 lamps and electronic ballasts. This measure has all of the requirements of the standard T8 lamps and electronic ballast measure described above. In addition, this measure must have a CRI ≥ 81 and must either have a ballast factor ≤ 0.78 or have a mean lumens per Watt ≥ 90 . A manufacturer's specification sheet must accompany the application.

Delamping

Delamping is the permanent removal of existing fluorescent lamps. Customers are responsible for determining whether or not to use reflectors in combination with delamping in order to maintain adequate lighting levels. Unused lamps, lamp holders, and ballasts must be permanently removed from the fixture to claim the delamping credit. This measure is applicable when retrofitting T12 to T8 or simply delamping a T8 fixture. It is not available for delamping a T12 fixture. A Pre-Notification Application and pre-inspection are required for delamping projects.

New T5 HO Fixtures

This incentive applies to new fixtures with at least four T5 high output (HO - 54W) lamps and electronic ballasts. The wattage of the replaced fixture must be at least 100 Watts for each lamp in the new fixture. For example, a four-lamp must replace ≥ 400 W fixture and a six-lamp must replace a ≥ 600 W fixture. All fixtures must have a reflector with a minimum of 90% reflectivity.

Exit Signs

High-efficiency exit signs must replace or retrofit an existing incandescent or CFL exit sign. Electroluminescent and light-emitting diode (LED) exit signs are eligible under this category. Non-electrified and remote exit signs are not eligible. All new exit signs or retrofit exit signs must be UL or ETL listed, have a minimum lifetime of 10 years, and have an input wattage ≤ 5 Watts.

Occupancy Sensors (Wall Box and Ceiling Mount)

Only passive infrared and/or ultrasonic detectors are eligible. Wall box and wall- or ceiling-mounted sensors must be hardwired and control interior lighting fixtures.

Daylighting Controls

Eligible controls shall consist of a photosensor that controls dimming ballasts. Dimming can be continuous or stepped at four or more levels (including on/off). Systems that allow on/off overrides are not eligible. A manufacturer's specification sheet must accompany the application.

Compact Fluorescent Lamps

This incentive applies to screw-in or hardwired compact fluorescent lamps (CFLs) and applies only if an incandescent or high intensity discharge (HID) lamp is being replaced. All screw-in CFLs must be ENERGY STAR[®]-rated. Any lamp receiving a retail buy-down by APS is not eligible. The lamp/ballast combination must have an efficacy ≥ 40 lumens per Watt (LPW). For screw-in CFLs, electronic ballasts are required for lamps ≥ 18 Watt. For hardwired CFLs, only complete new fixtures or modular retrofits with hardwired electronic ballasts qualify. The CFL ballast must be programmed start or programmed rapid start with a PF ≥ 90 and THD $\leq 20\%$.

Note: Replaced PCB ballasts and lamps must be disposed of properly. Documentation of disposal may be requested by the program staff.

Cooling Incentive Worksheet

Equipment Type	Size Category	Qualifying Efficiency *	Equipment Incentive (per ton)	Efficiency Incentive (per unit Eff. Over Qual. Eff. Per ton)
AC Units	≤5 Tons	11.6 IPLV	\$50.00	\$30.00
	>5 Tons ≤10 Tons	11.4 IPLV	\$50.00	\$30.00
	>10 Tons	11.2 IPLV	\$25.00	\$30.00
Water-Cooled Chillers	≤200 Tons	0.74 kW/Ton - IPLV	\$7.00	\$200.00
	201 - 400 Tons	0.67 kW/Ton - IPLV	\$7.00	\$200.00
	>400 Tons	0.54 kW/Ton - IPLV	\$6.00	\$200.00
Air-Cooled Chillers	<150 Tons	1.25 kW/Ton - IPLV	\$5.00	\$150.00
	≥150 Tons	1.25 kW/Ton - IPLV	\$10.00	\$150.00
			per unit	
Programmable Thermostats	NA	NA	\$50.00	per thermostat

*IPLV = Integrated Part Load Value, EER = Energy Efficiency Ratio
Specification sheets must accompany final application.

AC Units					
Make and Model	Quantity	Size of Unit (tons)	Unit Efficiency (IPLV)	Qualifying Efficiency (IPLV)	Subtotal

Water-Cooled Chillers					
Make and Model	Quantity	Size of Unit (tons)	Unit Efficiency (kW/Ton - IPLV)	Qualifying Efficiency (kW/Ton - IPLV)	Subtotal

Air-Cooled Chillers					
Make and Model	Quantity	Size of Unit (tons)	Unit Efficiency (kW/Ton - IPLV)	Qualifying Efficiency (kW/Ton - IPLV)	Subtotal

Programmable Thermostats			
Make and Model	Quantity	Square Footage of Controlled Area (if known)	Subtotal

Project Completion Date	
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Incentives cannot exceed 75% of incremental measure cost.	Cooling Total
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Specifications for Cooling Measures

Water- and Air-Cooled Air Conditioning

New air conditioning units or heat pumps that meet or exceed the qualifying Integrated Part Load Value (IPLV) shown in the Cooling Incentive Worksheet Table are eligible for an incentive. These units can be either air cooled or water cooled. They can be either split systems or single packaged units. Evaporative coolers and water source heat pumps do not qualify under this program, but may qualify under the Custom Incentive Program. All packaged and split system cooling equipment must meet Air-Conditioning and Refrigeration Institute (ARI) standards (210/240, 320 or 340/360), be UL listed, use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). A manufacturer's specification sheet indicating the system IPLV must accompany the application.

Water- and Air-cooled Chillers

Chillers that have a rated kW/ton for the Integrated Part Load Value (IPLV) conditions that is less than or equal to the qualifying efficiency shown in the Cooling Incentive Worksheet Table are eligible for an incentive. The chiller efficiency rating must be based on ARI Standard 550-98 for IPLV conditions and not based on full-load conditions. The chillers must meet ARI standards 550-98, be UL listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). The ARI net capacity value should be used to determine the chiller tons. A manufacturer specification/performance sheet with the rated kW/Ton-IPLV or COP-IPLV must accompany the application.

Incentive Calculations for Air Conditioners and Chillers

The total incentive is determined by two components – an equipment incentive and an efficiency incentive. Both the equipment and efficiency incentives are applied per ton of cooling installed. The equipment qualifies for an equipment incentive if the qualifying efficiency is met for the equipment size category. In addition, the efficiency incentive is added on a prorated basis if the equipment exceeds the minimum qualifying efficiency for the equipment size category.

The incentive for air conditioners is calculated as follows:

$$\text{Tons} \times [\text{Equipment Incentive/ton} + [\text{Efficiency Incentive/ton} \times (\text{IPLV}_{\text{new}} - \text{IPLV}_{\text{qualifying}})]]$$

The incentive for chillers is calculated as follows:

$$\text{Tons} \times [\text{Equipment Incentive/ton} + [\text{Efficiency Incentive/ton} \times (\text{kW/ton}_{\text{qualifying}} - \text{kW/ton}_{\text{new}})]]$$

Programmable Thermostats

ENERGY STAR®-labeled programmable thermostats are required to replace any non-programmable thermostat to automatically adjust the temperature at pre-selected times. To meet ENERGY STAR® standards, they must be capable of maintaining two separate programs (to address the different comfort needs of weekdays and weekends) and up to four temperature settings for each program. A manufacturer's specification sheet must accompany the application.

HVAC Testing and Repair Incentive Worksheet

	Number of Units	Total Tons	Total Cost	Incentive Cap	Incentive 75% of cost (not to exceed cap)
Quality Installation - Phase I				\$180 per unit	
Quality Installation - Phase II - Duct Seal				\$225 per unit + \$15/ton	

	Number of Units	Total Tons	Total Cost	Incentive Cap	Incentive 75% of cost (not to exceed cap)
HVAC Testing and Repair - Phase I				\$120 per unit	
HVAC Testing and Repair - Phase II - RCAF				\$120 per unit	
HVAC Testing and Repair - Phase II - Duct Seal				\$225 per unit + \$15/ton	
HVAC Testing and Repair - Phase II - Economizer				\$75 per unit	

Project Completion Date

HVAC Testing and Repair Total

Specifications for HVAC Testing and Repair Measures

Quality Installation

Quality Installation is performed when a new or replacement HVAC system is being installed. This measure applies to both new and existing buildings. This measure is split into two phases. Phase I consists of various sizing, testing, and repair activities. Phase II involves the sealing of ducts based on the Phase I test results. The following listing summarizes the requirements in order to receive an incentive. See Table 2 for documentation requirements.

Phase I Activities

- 1) System Sizing
Must use Air Conditioning Contractors Association (ACCA) standard calculations and provide documentation:
 - Manual N for load estimation
 - Manual CS for system selection
 - Manual Q for duct sizing (new construction only)
- 2) Refrigerant Charge and Air Flow (RCAF)
 - a) Perform RCAF Testing - (See HVAC Services Supplement for measurement procedures and target tables)
 - b) Correction of refrigerant charge and/or air flow until the criteria in Table 1 are met
- 3) Duct Leakage Testing - (See HVAC Services Supplement for measurement procedures)

Phase II - Duct Sealing Activities

Only perform Phase II Duct Sealing if leakage is >60 CFM per ton for existing construction or > 25 CFM per ton for new construction.

- 1) Seal ducts until leakage is below 60 CFM per ton or leakage is reduced by 20%. Leakage of 25 CFM per ton or less required for new construction (See HVAC Services Supplement for approved sealing materials).
- 2) Measure duct leakage after sealing using same procedure that was used in Phase 1 to verify that required leakage reduction was achieved.

Table 1 RCAF Criteria

System Type	Criteria
For Fixed Orifice	+/-5 degrees F of target superheat temp
For Systems with TXV	+/- 3 degrees F of target subcool temp
All	Airflow greater than 400 cfm per ton or
	+/- 3°F of target temp differential between supply and return air

HVAC Testing and Repair

HVAC Testing and Repair is performed on an existing packaged unit or split system. This measure is split into two phases. Phase I consists of system testing. Phase II involves repairs and post-testing of the system. The following information summarizes the requirements in order to receive an incentive. See Table 2 for documentation requirements.

Phase I Activities

- 1) Perform Refrigerant Charge and Air Flow (RCAF) Testing (See HVAC Services Supplement for measurement procedures and target tables).
- 2) Perform Duct Leakage Testing - (See HVAC Services Supplement for measurement procedures).
- 3) Perform Economizer Functional Testing - (See HVAC Services Supplement for procedures.)

Phase II - RCAF Repair Activities

Only perform Phase II RCAF repair if criteria in Table 1 are not met.

- 1) Correction of refrigerant charge and/or air flow until the criteria in Table 1 are met.
- 2) Perform RCAF test using same test procedure as used in Phase I to verify that criteria was met.

Phase II - Duct Sealing Activities

Only perform Phase II Duct Sealing if leakage is >60 CFM per ton.

- 1) Seal ducts until leakage is below 60 CFM per ton or until leakage is reduced by 20% (See HVAC Services Supplement for approved sealing materials).
- 2) Measure duct leakage after sealing using same test procedure as was used in Phase 1 to verify that required leakage reduction was achieved.

Phase II - Economizer Repair Activities

Only perform Phase II Economizer repair if economizer does not open or close under simulated cold or hot outdoor temperatures.

- 1) Repair function of economizer should it not correctly open under simulated cold outdoor air conditions or not correctly close under simulated hot outdoor conditions.
- 2) Perform Economizer Functional Test using same test procedure as used in Phase I to verify that criteria was met.

Table 2 - Documentation Requirements

Provide the following information for each system (where applicable)	
Equipment Sizing Calculations (for Quality Installation only)	
System Size (tons)	
Nameplate SEER or EER or age (if available)	
Nameplate Refrigerant Quantity	
Target and actual superheat or subcool temps from all tests	
Amount of refrigerant added or removed	
Target and actual for supply/return temperature differentials from all tests	
Air flow CFM from all tests	
Duct leakage CFM from all tests	
Economizer position at simulated outside hot and cold temperatures	

Refrigeration Incentive Worksheet

Refrigeration Measures				
Measure	Incentive Unit	Qty	Incentive/Unit	Subtotal
Strip Curtains on Walk-Ins	Per Linear Foot (door width)		\$5.00	
Night Covers	Per Linear Foot		\$10.00	
Reach-in Cooler Controls	Reach-in Cooler		\$100.00	

Anti-Sweat Heater Controls					
Make/Model	Type (no Multi-Deck)	Number of Sensors	Case Length (LF)	Incentive per Sensor	
				\$200.00	
				\$200.00	
				\$200.00	

High-Efficiency Ice Makers					
Make/Model	Air or Water Cooled	Quantity	Size (lbs / 24 hrs)	Incentive per Ice Maker	
				\$45.00	
				\$45.00	
				\$45.00	

High-Efficiency Refrigerators or Freezers					
Make/Model	Freezer or Refrigerator	Quantity	Number of Doors	Incentive per Unit	
				\$75.00	
				\$75.00	
				\$75.00	

High-Efficiency Evaporator Fan Motors					
Make/Model	PSC or EC Motor	Quantity	Motor HP	Incentive per Unit	
				\$10.00	
				\$10.00	
				\$10.00	

Vending Machine Controls				
Make/Model	Unit	Quantity	Incentive per Unit	
Beverage Machine Controls	Vending Machine		\$100.00	
Snack Machine Controls	Vending Machine		\$25.00	

Project Completion Date

Refrigeration Total	
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Incentives cannot exceed 75% of incremental measure cost.

Specifications for Refrigeration Measures

Strip Curtains on Walk-ins

New strip curtains or clear plastic swinging doors must be installed on doorways of walk-in boxes and refrigerated warehouses. This incentive is not available for display cases or replacing existing strip curtains. Incentive is based on linear foot of door width.

Night Covers

This measure consists of installing a cover on an otherwise open vertical or horizontal refrigerated case to decrease cooling load. It is recommended that these films have small, perforated holes to decrease moisture buildup. Customers should also consider using proper compressor capacity modulation mechanisms (such as VSDs or an unloader). The incentive amount is based on the length of the case.

Reach-in Cooler Controls

The reach-in cooler is assumed to be a refrigerated unit that contains only non-perishable bottled and canned beverages. The controller must include a passive infrared occupancy sensor to turn off fluorescent lights and other refrigerated systems when the surrounding area is unoccupied for 15 minutes or longer. The control logic should power up the machine at 2-hour intervals to maintain product temperature.

Anti-Sweat Heater Controls

For this measure, a device is installed that senses the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation (on the inner glass pane) also qualify.

High-efficiency Ice makers

Ice makers that are eligible can be air cooled or water cooled and have a minimum capacity of 101 lbs of ice per 24-hour period. The minimum efficiency required is per the Federal Energy Management Program guidelines at: http://www.eere.energy.gov/femp/procurement/eeep_ice_makers.cfm
A manufacturer's specification sheet must accompany the application.

High-efficiency Reach-in Refrigerators and Freezers

This measure involves replacing standard supermarket reach-in refrigerated cases with ENERGY STAR®-rated high-efficiency cases, which includes one-door, two-door, and three-door refrigerators and freezers. All one-door units have a capacity of ≤30 cubic feet; two-door units are ≤60 cubic feet; and three-door units are ≤90 cubic feet. ENERGY STAR®-labeled commercial solid door refrigerators and freezers are designed with components such as electronically commutated motor (ECM) evaporators and condenser fan motors, hot gas anti-sweat heaters, or high-efficiency compressors. A manufacturer's specification sheet must accompany the application.

Evaporative Fan Motor

This measure is applicable to the replacement of an existing standard-efficiency shaded-pole evaporator fan motor in refrigerated display cases or fan coil in walk-ins. The replacement unit is either a ECM or permanent split-capacitor (PSC) motor.

Vending Machine Controls: Beverage and Snack

The beverage machine is assumed to be a refrigerated vending machine that contains only non-perishable bottled and canned beverages. Controller for both types of systems must include a passive infrared occupancy sensor to turn off fluorescent lights and other vending machine systems when the surrounding area is unoccupied for 15 minutes or longer. For the beverage machine, the control logic should power up the machine at 2-hour intervals to maintain product temperature.

Motors Incentive Worksheet

Premium-Efficiency Motors - Minimum Qualifying Efficiencies

Horse Power	3600 RPM		1800 RPM		1200 RPM		Incentive/HP
	Open	Closed	Open	Closed	Open	Closed	
1	77.6%	77.6%	85.7%	85.0%	82.2%	85.5%	\$10.00
1.5	85.4%	85.1%	86.9%	87.2%	86.2%	N/A	\$7.00
2	86.7%	86.1%	87.5%	87.4%	87.1%	88.1%	\$6.00
3	86.1%	87.6%	89.8%	89.7%	89.3%	90.2%	\$6.00
5	88.5%	89.5%	90.4%	90.2%	90.1%	90.0%	\$6.00
7.5	89.7%	90.5%	91.7%	91.5%	91.5%	91.7%	\$5.00
10	90.4%	91.7%	92.0%	91.8%	92.0%	92.0%	\$4.00
15	91.1%	91.8%	93.2%	92.7%	92.7%	92.5%	\$3.00
20	91.8%	92.1%	93.3%	93.3%	92.9%	92.5%	\$2.50
25	92.9%	92.9%	94.0%	93.8%	93.7%	93.4%	\$2.50
30	93.3%	92.7%	94.0%	93.9%	94.0%	93.7%	\$2.50
40	93.6%	93.4%	94.5%	94.6%	94.5%	94.3%	\$2.50
50	93.7%	93.9%	94.9%	94.9%	94.6%	94.4%	\$2.25
60	94.3%	94.3%	95.6%	95.2%	95.1%	94.9%	\$2.00
75	94.4%	94.5%	95.3%	95.4%	95.3%	94.9%	\$1.75
100	94.6%	94.8%	95.9%	95.5%	95.5%	95.4%	\$1.50
125	94.7%	95.2%	95.9%	95.4%	95.7%	95.5%	\$1.50
150	94.8%	95.5%	96.1%	95.8%	95.9%	95.9%	\$1.50
> 150	95.1%	95.7%	96.2%	96.3%	96.0%	95.8%	\$1.50

Efficiency standards are for all motors less than or equal to the indicated horsepower (up to the lower sized motor). For example, for a 4 HP motor, use the efficiency standard for a 5 HP motor. For motors less than 1 HP, use values for 1 HP.

Motor Description (Make/Model) Enter X under speed and type	Qty	Motor Size (HP)	3600 RPM	1800 RPM	1200 RPM	Open	Closed	Enter Actual Motor Eff.	Req'd Motor Eff.	Incentive \$/HP	Subtotal

Motors Total

Variable-Speed Drives

Incentive per horsepower (all sizes)

\$50

VSD Description	Quantity	VSD Size (HP)	Incentive Amount	Subtotal

Project Completion Date

VSD Total

Incentives cannot exceed 75% of incremental measure cost.

Motors & VSD Total

Specifications for Motor Measures

Motor Measures

Motors eligible for an incentive are three-phase induction motors of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Incentives are based on the motor's Nominal Full Load Efficiencies that meet or exceed the efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching water or air flows (GPM, CFM) of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may increase energy savings.

Variable-Speed Drives

Variable-speed drive (VSD) applications are available for this incentive, except for installing a VSD on a new chiller. New chillers with integrated VSDs are eligible under the chiller incentive. The VSD installation must result in energy savings. The installation of a VSD must accompany the permanent removal or disabling of any throttling devices such as inlet vanes, bypass dampers, and throttling valves. A 3% impedance choke is recommended to handle any power factor corrections that may occur. VSDs are sensitive to overvoltage.

Terms and Conditions (1 of 2)

Introduction

Arizona Public Service Company (APS) is offering prescriptive incentives under the APS Solutions for Business Program to facilitate the implementation of cost-effective energy-efficiency improvements. KEMA is implementing this program for APS.

Program and Project Eligibility

Prescriptive incentives for retrofit projects are available under the APS Solutions for Business Program to non-residential customers within APS's service territory. New construction and major renovation projects should use a New Construction Application. Energy efficient equipment or services purchased, contracted for or work conducted prior to February 23, 2006 is not eligible for an incentive. The prescriptive measures included in this program are not designed to promote fuel-switching.

The energy savings from installed measures must occur on a meter with an eligible rate schedule. Most non-residential rate schedules are eligible. The ineligible rate schedules are Solar 1 and 2, E-36, and some Special Contracts.

Incentive Caps

The total incentive paid cannot exceed 75 percent of the incremental measure cost. Contractor labor costs can be considered in measure costs. Customer labor costs will not be considered.

Customers with an aggregated demand of 200 kW or less can receive up to \$150,000 per customer per program year. Customers with aggregated loads greater than 200 kW demand can receive up to \$300,000 per customer per program year. All incentives paid through the APS Solutions for Business Program will be applied towards the customer incentive cap.

Please refer to the Program Policies & Procedures for further information regarding eligibility. This document can be found on the APS Solutions for Business section of the APS website: aps.com.

Pre-Notification

Submitting a Pre-Notification Application is strongly encouraged for all participants in order to reserve funding. **A Pre-Notification Application and pre-inspection by KEMA are required to receive an incentive for the delamping measure.** The incentives for certain measures may be disallowed or reduced if a Pre-Notification Application is not submitted and KEMA is unable to determine measure eligibility due to an inability to document qualifying pre-existing equipment.

KEMA will review the Pre-Notification Application for completeness of customer information. Funds will be reserved for 120 days, unless an applicant requests, and is granted an extension. A letter acknowledging reservation of funds and the reservation expiration date will be sent to the applicant. The program team reserves the right to contact the customer after 30 days to ensure that the project is moving forward and may cancel the commitment based on the customer's response. Funds that have been reserved are not transferable to other projects, facilities, and/or customers.

In order to be eligible, all Pre-Notification Applications should be postmarked no later than November 1, 2007, and measures should be installed by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Final Application

A Final Application is to be submitted after the project is completed. Project documentation is also required, including copies of all itemized, paid invoices and receipts detailing the specific equipment and purchases, the services provided, and other costs.

The location or business name on the invoice must be consistent with the application information. Final Applications and all required supporting documentation should be received by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

The incentive amount cannot exceed 75 percent of the incremental measure cost. The project invoice must provide sufficient detail for KEMA to separate the cost of the prescriptive measures from the cost for other services such as repairs and building code compliance.

Terms and Conditions (2 of 2)

In cases where the contractor will receive the incentive payment directly, the submitted invoices must include the full cost of the measures and not simply show the portion of the project cost that the APS customer will pay.

KEMA and APS reserve the right to request additional supporting documentation as deemed necessary to ensure measure eligibility and verify that the expected energy savings will occur. All customer information will be held in confidence.

Requested information could include: equipment purchase dates, installation dates, proof that the equipment is operational, manufacturer specifications, warranty information, and proof of customer co-payment.

Application Submittal Process

Verify that your project is eligible and meets the project requirements as set forth in the Application and the APS Solutions for Business Program Policies & Procedures. Then:

1. Submit the Pre-Notification Application to the Program Team (required or optional depending on measure type). For the Pre-Notification Application, download and complete the Program Application and check the box that says "Pre-Notification" at the top. Pre-Notification Applications are requested to be submitted by November 1, 2007. Incentive funds will be reserved for 120 days, or until November 30, 2007, whichever is first.*

2. Customer/Contractor installs equipment according to the terms and conditions described for the eligible measures as set forth in the APS Solutions for Business Policies & Procedures.

3. When the project is complete, submit the Final Application with all required documentation. Check the box that says "Final Application" at the top (a copy of the Pre-Notification Application can be used with changes indicated) within 60 days after project completion or by November 30, 2007, whichever comes first.*

4. KEMA will review the final project documentation and process incentives within 4 to 6 weeks after approval of the Final Application.

*Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

Application Review Process

KEMA will review final applications for eligibility and completeness. Completed applications will be reviewed in the order received. Funds will not be reserved for the project until the team receives a complete application and determines that the project meets the program eligibility requirements as set forth in the Policies & Procedures. Applicants who submit incomplete applications will be notified of deficiencies, but will lose their place in line in the review process until all requested information is received.

Inspections: The program team reserves the right to inspect all projects to verify compliance with the program rules and verify the accuracy of project documentation. This may include pre-installation and/or post-installation inspections, detailed lighting layout descriptions, metering, data collection, interviews, and utility bill data analyses. The customer must allow access to records and installation sites for a period of 3 years after receipt of incentive payment.

APS Solutions for Business
428 E. Thunderbird Road #749
Phoenix, AZ 85022

Tel: 1-866-277-5605

Fax: 1-866-277-5604

Email: APS.solutionsforbusiness@kema.com

All official program updates will be posted on the APS Solutions for Business section of the APS website: aps.com

Incentives are available on a first-come, first-served basis.

AGREEMENT

Tax Liability

Incentives are taxable and if greater than \$600, will be reported to the IRS unless you are exempt. KEMA will report your incentive as income to you on IRS Form 1099 unless you have indicated Corporation or Exempt tax status on the Applicant Information page of the application. Pinnacle West Capital Corporation, Arizona Public Service Company (APS) also known as "the utility," and KEMA are not responsible for any taxes that may be imposed on your business as a result of your receipt of this incentive.

Agreement

As an eligible APS customer, I certify that I contracted for or purchased and installed the indicated energy efficiency measures after February 23, 2006 for use in my business facility and not for resale. I have attached documentation establishing proof of payment for the items installed according to this application. I agree to verification by the utility, KEMA, or their representatives of both sales transactions and equipment installation.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number is representative of the applicant. I understand that incentive payments assume related energy benefits over a period of 5 years or for the life of the product.

I agree that if: (1) I do not install the DSM related product(s) identified in my application, or (2) I remove the DSM related product(s) identified in my application before the end of the life of the product or within a period of 5 years from receipt of the incentive, whichever is less; then I shall rebate a prorated amount of incentive funds to APS based on the actual period of time in which the DSM related product(s) were installed and operating (or the full amount if the DSM product was never installed). This is necessary to assure that the DSM project's related energy benefits will be achieved.

I understand that the program may be modified or terminated without prior notice.

I understand that this application and the paid itemized invoice must be received by KEMA within 60 days of installation of energy efficiency measures. All equipment must be purchased and installed prior to submitting the Final Application.

I understand that this project must involve a capital improvement that results in improved energy efficiency. I also understand that all materials removed, including lamps and PCB ballasts, must be disposed of properly.

In no case will APS pay more than 75 percent of the incremental measure costs of the project. I understand that the utility, KEMA or their representatives have the right to ask for additional information on project costs, in order to document incremental costs. The utility and KEMA will make the final determination of incentive levels for this project.

The program has a limited budget. Applications will be processed on a first-come, first-served basis until allocated funds are spent. Pre-Notification Applications are requested to be submitted by November 1, 2007 and Final Applications by November 30, 2007. Applications received after November 30, 2007 may also be eligible, based upon available funding and program continuation.

I have read and understand the program requirements and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

Customer Signature

Project Completion Date

Third Party Signature
(Required only if receiving check)

Print Name

Total Project Cost

Print Name

Date

Total Incentive Requested

Customer Initials
(Initial here only if requesting the
check be issued to a third party)

Please print out, sign, and return to KEMA.

For Final Applications, sign and submit only after all equipment has been installed.